

THE
RAILWAY GAZETTE

A Journal of Management, Engineering and Operation
INCORPORATING
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GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export

NOTICE TO SUBSCRIBERS

Consequent on the paper rationing, new subscribers cannot be accepted until further notice. Any applications will be put on a waiting list and will be dealt with in rotation in replacement of subscribers who do not renew their subscriptions

POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE possesses the necessary permit and facilities for such dispatch.

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas

TO CALLERS AND TELEPHONERS

Until further notice our office hours are:

Mondays to Fridays 9.30 a.m. till 5.30 p.m.

The office is closed on Saturdays

ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

Prime Minister and Nationalisation

INTERVENING in the debate in the House of Commons on October 13, the Prime Minister made a powerful speech which included the following remarks on the subject of nationalisation:—

"We must also be careful that a pretext is not made of war needs to introduce far-reaching social or political changes by a side wind. Take the question of nationalising the coal mines. These words do not terrify me at all. I advocated nationalisation of the railways after the last war, but I am bound to say that I was a bit affected by the experience of the national control of the railways after the war, which led to the public getting a very bad service, to the shareholders having very unsatisfactory returns, and to one of the most vicious and hazardous strikes with which I have ever been concerned. However, as I say, the principle of nationalisation is accepted by all, provided proper compensation is paid. The argument proceeds not on moral grounds but on whether in fact we could make a better business of the whole thing for ourselves, a more fertile business for the whole nation as a whole, by nationalisation than by relying on private enterprise and competition. It would raise a lot of argument, a lot of difference of opinion, and it would be a tremendous business to nationalise the coal mines, and unless it could be proved to the conviction of the House and of the country, and to the satisfaction of the responsible Ministers, that that was the only way in which we could win the war, we should not be justified in embarking upon it without a general election. It would be very difficult to have a general election at the present time." ("Parliamentary Debates," October 13, column 921).

Although the phrase in italics doubtless refers to the nationalisation of the coal mines and not to the nationalisation of railways or other public services, it would appear to be extremely desirable that this point should be clarified at an early date, so as to prevent any misunderstanding arising in the future.

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British-Owned Railway Mission in Argentina

Mr. J. M. Eddy and Mr. H. C. Drayton who, with Lord Forbes, constitute the mission sent to Argentina by the British-owned railways, have arrived in Buenos Aires. In the course of a statement made on his arrival there, Mr. Eddy said that the last four years had been extremely arduous for the railways because of the difficulty of obtaining materials, but he believed that the problems would continue to be faced successfully, and that the functioning of the railways would be maintained. He and his fellow directors intended to study with railway representatives in the Argentine post-war problems, the modernisation of the railways, and the restoration of the lines and rolling stock, as well as new transport problems. Argentina required the best possible transport for the facile export of its production. He added that the mission was to seek an opportune moment to speak with the Argentine Government as to the best form in which the problem of the railways could be faced. The mission is to stay in Argentina for at least two months.

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Engineering Exports

A memorandum issued by the Export Committee of the Engineering Industries Association deals at some length with group representation overseas. In its study of the subject the committee received many complaints from members that because of the operation of the present taxation legislation, no provision for post-war reconstruction, including in particular the reopening of export trade, was possible, and it was held that they would be seriously handicapped on financial grounds. To help medium-sized and smaller firms to overcome this handicap the committee recommends the establishment of groups of firms whose products are non-competitive but complementary to one another. This would help to increase export turnover and reduce selling costs. Groups might also be formed on the basis of common marketing areas or a common interest in a particular class of industrial customer. Among their objects would be to give the best possible service to overseas customers by having on the spot a technician with full knowledge of the application of the range of products he is selling, and to investigate overseas markets on post-war conditions. The committee also urges that British engineering industries should be consulted before action is taken as to the disposal of war stores by Allied Governments.

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Mr. H. W. Huggins

Mr. H. W. Huggins, who is retiring from the position of Deputy Chief Mechanical Engineer, North Western Railway (India), is an outstanding example of a thoroughly-competent mechanical engineer. His many years at the bench qualified him to direct proper supervision of rolling stock, and few knew better how to prevent and cure the ailments to which locomotives are prone. Between

1939 and 1943 he was responsible for the remarkable reduction in the number of hot-boxes on the N.W.R. Mr. Huggins realised that, to achieve a high standard of efficiency and workmanship, improvements in the conditions in which the shed fitters worked must be secured. He insisted on adequate protection for them from the sun, by the erection of large shelters spanning several tracks. He also planned amenities for the staff such as hot-and-cold running-water baths, and he generally improved conditions at all important sheds. His foresight before the war in urging the purchase of machine tools resulted in the larger N.W.R. sheds being well equipped for facing the severe strain of abnormal wartime traffic. Some details of Mr. Huggins's career are given on page 415.

"More Work"

In a broadcast talk entitled "More Work," given on July 7 from the Lahore Studio of All-India Radio, Sir Arthur Griffin, General Manager of the North-Western Railway, called attention to the dependency of output in industry on the average work done by the average worker. Despite brilliant organisation by Works Manager and Production Engineer and most up-to-date plant, output of factory or workshop is still no better than this average work by average worker. The problem of increasing output can be solved only if the worker can be induced to work above his average. Sir Arthur alluded to the monotony and drudgery of repetition work, especially under wartime conditions of long hours and reduced holidays. He advocated a word of gratitude and encouragement as being worth a great deal to the weary worker, and pointed out how greatly good food and housing, healthy recreation and insistence on holidays whenever they can be given have great effect on the morale of the worker and are invaluable in boosting output. At work, too, a sense of discipline tempered with fair play and justice, a team spirit born of confidence that gains as well as losses will be shared alike by employer and employed, and a knowledge that outward and visible signs of appreciation will reward hard work, are the things that count for so much towards improving output.

Railway Road Services in Sweden

In a recent official survey of the road motor services operated by all the Swedish railways, the route length of the services operated in 1942 is shown at 20,475 km. (12,723 miles), compared with 21,151 km. (13,143 miles) in 1941. By the end of the year 1942, the Swedish railways owned 1,345 buses and 384 motor lorries; no less than 88 per cent. of this fleet had been converted to producer-gas operation. The performance of the buses in 1942 aggregated 38,300,000 km., and was thus 12.6 per cent. lower than in the preceding year (43,800,000 km.), but motor lorry services increased from 5,300,000 km. to 5,900,000 km. in 1942, mainly by reason of the acquisition by the railways of a number of privately-owned goods services. The Swedish State Railways accounted for the largest share in the total performance, namely, 15,000,000 km. in 1942, while the Göteborg-Dalarna-Gävle Traffic Group came second with 10,400,000 km., and the Stockholm-Saltsjön Railway third with 4,300,000 km. The average yield on the capital invested by the railways in their road motor organisations amounted to 6½ per cent.

American Railways Post-War Funds

Some of the benefits which may be expected to accrue to the United States railways in the post-war years are apparent from a recent address by Mr. R. V. Fletcher, Vice-President of the Association of American Railroads. In contradistinction to the British railways, which have their revenues limited to the rental payable under the financial agreement with the Government, net earnings in the United States railways have established new records. Mr. Fletcher pointed out that it was intended that conservative dividend policies should be continued so as to build up reserves for post-war contingencies, and he advocated revising the internal revenue code to permit railways to set aside funds for post-war maintenance and repair work. He said that dividend disbursements last year amounted to only 22 per cent. of the revenue available for that purpose. The *Wall Street Journal* in a recent issue also dealt with the good position in which the American railways will be to buy equipment needed at the end of the war, and pointed out that 29 railways now going out of reorganisation have had their long-term debt reduced by 47.6 per cent., and their annual fixed charges reduced by 71.4 per cent.

The Late Mr. O. Cecil Power

Few men in the passenger road transport industry have so impressed their personality on a district as the late Mr. Orlando Cecil Power, Director & Traffic Manager of the Birmingham &

Midland Motor Omnibus Co. Ltd., whose sudden death on Thursday of last week we record with regret. Of him it can be said with truth that he died in harness, for he was in London attending a Council Meeting of the Public Transport Association, and was taking an active part in the deliberations when a sudden seizure resulted in his passing within a few minutes. He was born in Birmingham on July 24, 1879, and was thus 64 years of age. After a varied early business career, Mr. Power joined the B.E.T. organisation in September, 1899, in connection with a horse-bus undertaking that had come into the group, and has remained with it in the Birmingham area ever since. He played an important part in the introduction of the motorbus in the Midlands, and in its extension over a wide area. Some measure of the change may be gathered from the facts that when Mr. Power assumed the title of Traffic Manager in April, 1902, he was responsible for a stud of over a thousand horses, and more than 100 buses and coaches. Today the "Midland Red" fleet totals 1,391 motor vehicles. In addition to holding many directorships in B.E.T. companies working in the Midlands, he has been Chairman of the Birmingham Horse & Motor Vehicle Owners Association for 32 years, and was for 10 years Chairman of the Birmingham & District Section of the Institute of Transport. A portrait and biography were included in our issue of March 5 last.

Lighting and Passenger Safety

Recently American railways have been devoting attention to reducing their staff casualty list by closer attention to the lighting of engine sheds, workshops, marshalling yards, and elsewhere. The inquiry is now proceeding to the greater protection of the passenger, and has been directed particularly, on the New York subways, which handle over five million passengers daily, to risks involved in stepping over the space between a car door and a station platform, and in walking downstairs. One device is a strip of 8 in. square yellow terrazzo tiles along the platform edge, and lit by from 4 to 6 foot-candles, of which about 70 per cent. is reflected, or roughly 700 times as much illumination as that of the platform in general. The illuminated platform edge strip has reduced accidents already by 52 per cent. at the stations so dealt with. In reducing stairway accidents, it was discovered that effective lighting must be accompanied by other conditions; for example, the height of the risers must not vary by more than ½ in., certain relations should be maintained between height of riser and width of tread—7 in. to 11 in. was found an ideal proportion—landings should allow for two normal steps on the part of the passenger, handrails should be provided on both sides as well as in the centre if the width of the stairway exceeds 11 ft., and the source of stairway illumination should be concealed from the descending passenger.

Discouraging the Driver

From time to time the regular passenger receives a reminder that engine-crews are no more than human. Recently, when we were travelling north behind a streamlined Pacific with a heavy train, permanent way and signal checks caused various delays, but the arrears were recovered, and a junction a little more than 150 miles from London was reached on time. Time was lost here waiting the attachment of a van, and the train left 7 min. late. With a clear road, the crew, despite an 18-coach load with a gross weight of some 575 tons behind the tender, steadily recouped the lost minutes, and when all but 250 miles from London the train was once again on time. Then, at the foot of a long and steep gradient, control saw fit to turn a train of tank wagons on to the line ahead, so stopping the express on a 1 in 111 gradient, and then checking it at every signal for the next 7 miles, until finally the offending freight was put out of the way into a loop. There may have been adequate reasons for this control action, but they were not immediately apparent; and the effect on the engine-crew, as was hardly to be wondered at, was discouragement. On clearing the summit the express was 17 min. late; down the long ensuing descent the speed, though a maximum of 75 m.p.h. is permissible, was mostly under 65; exaggerated respect was paid to curves; and the next stop was reached 17 min. late and left 25 min. late. Though making up lost time is now officially encouraged, it is possible for operating discouragement more than to nullify the encouragement thus theoretically given to the engine-crews.

Running Fits for Bearings

In the motor car and in the diesel locomotive it is possible to make the power unit a separate entity and secure it to the frame by three attachments that are bound to remain in a plane; these can be rubber-bushed to give an added degree of immunity

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from the pulling and twisting of the frame under stress. In a steam locomotive the frame is one of the links in the working mechanism; it is far too large to be considered as a rigid body, and furthermore the crank-axle bearings have to be mounted flexibly in it so as to permit the engine weight to be spring borne. For these and other reasons the locomotive engine, considered as a mechanism, is in a class by itself; its peculiarities are often overlooked by engineers whose experience lies in a different direction. A mistake commonly made by critics and would-be improvers of the locomotive is to assume that working parts can be made with close running fits; they talk of clearances of one thousandth of an inch or even half a thousandth. As Mr. Bulleid had occasion to remark at a recent Institution of Locomotive Engineers' meeting the practical unit of measurement in locomotive engineering has to be much larger, say a sixty-fourth of an inch or half a sixty-fourth. Fine running fits merely result in overheating and seizures, because they do not permit the small deviations in journal alignment and the end play that flexibility entails.

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The Position of the Regulator

There are many ways of driving a steam locomotive but the ideal seems to lie between the extremes of full-open regulator with cut-off control to suit power requirements, and a light regulator opening with an invariable but rather late cut-off. Mindful of thermodynamic theory, and of the loss occasioned by any irreversible throttling process, some engineers have advocated the first method; drivers in Czarist Russia, anxious to sleep away the hours during slow, long journeys, discovered the practical virtues of the second. As Dr. Lomonosoff has pointed out, the combination of a light throttle-opening with a late cut-off provides ample steam and power for the slow ascent of a heavy grade, prevents dangerous speeds under easier conditions, and inhibits wheel slip. An engine operating on the "lazy" combination can be left like any farmer's horse to its own devices. A practical objection to the open-regulator method of operation is that it leaves many engines without sufficient draught to maintain the fire; it seems also to occasion rough running due to excessive compression at very short cut-offs. Successful driving calls for compromise; consequently all that can be said of the regulator opening is that it should be as wide as is consistent with satisfactory running conditions.

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The U.S.A. Railways in Wartime

THE name of Mr. Edward R. Stettinius, Jr., has been prominent recently in the American news. He was largely instrumental in steering the Lease-Lend scheme through a shoal of difficulties and the success of his work was recognised last month when he was appointed Under-Secretary for Foreign Affairs in succession to Mr. Sumner Welles. In the office which he has just left Mr. Stettinius had an unique opportunity of judging the performance of the American railways under war conditions and recently expressed his opinion in these emphatic terms:—"Much of the credit of getting Lend-Lease war materials to the fronts where needed and when needed belongs to the American railroads. . . . In this, our greatest emergency, the railroads have written their brightest chapter." Fortunately, the chapter is open to all to read. Businessmen in the United States have an insatiable appetite for statistics, and the railroads cater for their taste by publishing "A Yearbook of Railroad Information," packed with facts and figures. The 1942 edition of this handbook was briefly noticed in our April 16 issue, and some of its figures are embodied in the article on the last report of the Interstate Commerce Commission which appears elsewhere in this issue. The yearbook is itself based on the masterly Review of Railroad Operations prepared annually by Dr. Julius H. Parmelee, Director, Bureau of Railway Economics, Washington, D.C. With noteworthy promptitude this review is published by our American contemporary, the *Railway Age*, and, in spite of the Battle of the Atlantic, the analysis of 1942 results came rapidly to hand, telling us far more about happenings in the States than we know about the work of British railways under Government control. Here are some of the "high lights" revealed by Dr. Parmelee's statistical tables.

Freight traffic has soared to new peaks. Last year revenue ton-miles reached the colossal total of 630 billions (on the American computation of a billion as a thousand millions). That was an increase of nearly one third on the 1941 ton-mileage, which was 6 per cent. over the previous record of 1929—the amazing year when a trade boom lasted for nine months, only to end in the most disastrous slump in history. The car-loadings during 1929 remain a record. In no other year except 1926, when a huge tonnage of coal was shipped to this country, have a million wagons been loaded on an average each week. In both 1926 and 1929 the tonnage originating on rail was considerably greater than the tons transported in 1941, but was

exceeded by the weight carried in 1942. Once upon a time wagon-loadings were considered as the barometer of railway activity. A weekly statement is still published, but has lost much of its significance because wagons in wartime carry heavier loads and move longer distances. On an average the capacity of a freight wagon was over 50 tons last year and each serviceable wagon ran between 50 and 51 miles a day, double the distance covered twenty years ago.

There is reason to believe that the movement of freight traffic on our main lines has developed in a similar way. The tonnage originating in 1929, when our railways enjoyed a spell of moderate prosperity, probably exceeded the forwardings of any war year. The strain on the railways during the past four years has been caused, so far as can be judged, by heavy wagon loads, increase in length of haul and the diversion of traffic from normal channels to difficult and sometimes congested routes. It is a pity that operating statistics for the four groups are no longer issued. The only details available are contained in the series of articles recently published in this journal. These gave some pointers for each group, but there seems to be no reason why the Ministry of War Transport should not circulate the principal statistics required to gauge the work of our railways up to the end of 1942. Perhaps there have been fears in official circles that our results might become known to the enemy, but the Germans could hardly use to our detriment records going back so far.

If, as is quite probable, Herr Hitler and his ministers have heard about the record-breaking across the Atlantic, they would have fresh ground for anxiety. While factories on the Continent are being bombed out of production, it must be disheartening to learn that the American train load amounted to 1,030 tons of freight in 1942. This average freight train carried a 28 per cent. larger load than was handled in 1929. It consisted of 50 wagons and moved at a speed of nearly 16 m.p.h., when all stops were taken into account. In England a "convoy" coal train is usually made up of 50 wagons, carrying about 500 tons, and may move at 15 m.p.h., though it has priority over ordinary freight trains. This comparison gives some idea of the size of American train units. Their passage through the wide spaces of the States is a distinct feature of industrial progress and does not lack a picturesque aspect. Few readers, we imagine, would not be impressed by the photograph, reproduced in our October 1 issue, of a 4-6-6-4 locomotive, weighing 462 tons, at the head of a 57-wagon freight train on the Denver & Rio Grande Western.

The average speed of American freight trains has fallen slightly below the record level reached in 1938, when traffic was thin. On the other hand, the service performed in one hour last year by the average train—in technical language, "Net ton-miles per train-hour"—set a new peak at 16,316, more than double the service rendered twenty years ago. In the course of achieving this feat, each active freight locomotive ran on an average nearly 123 miles a day, 18 miles further than it went in 1939. This is yet another record, and its merit is enhanced by the fact that less coal was consumed in moving 1,000 tons of freight and equipment, including the weight of the locomotive. At 111 lb. this statistic was 31 per cent. below 1921, a gratifying result in view of the pressing need for economy in fuel.

A similar improvement has taken place in the use of fuel on passenger engines. That is fortunate, as the volume of passenger business has risen to heights never before attained. This is a dramatic change. Since 1932 the number of passengers carried year by year has been less than half the number booked in 1921. The passenger-miles worked have also fallen, though not to the same extent. Although the railroads lost short-distance passengers on a wholesale scale to the private motor car and motor coach, of recent years they displayed commendable enterprise in developing their long-distance carryings and staved off the competition of airlines. Now the shortage of petrol, rubber, and replacements has driven the travelling public back to rail and about 10 million members of the armed forces were also conveyed in 1942. Altogether, passenger traffic last year was 134 per cent. above the 1939 level and 13 per cent. over 1920, the previous "barrier" year.

The railways are in the happy position of reaping the reward of the extraordinary exertions which they are putting forth. In operating their properties they are not trammelled by Government control and are left free to improve their net earnings. The table below shows, however, that the rate of return on their whole property investment, including cash, materials, and supplies, is well under the basis of 5½ per cent., considered as fair under the provisions of the Transportation Act of 1920.

Year	Return per cent.
1929	4.81
1938	1.43
1939	2.25
1940	2.59
1941	3.75
1942	4.92

(At October 31, 1942)

Nobody can grudge the railways or their stockholders their moderate recompense as the level of rates and fares is remark-

ably low. During the past ten years the average receipt for hauling a ton of freight a distance of one mile has been less than one cent and is gradually diminishing. Over the same period the average payment for conveying a passenger one mile has never been more than two cents. Despite certain advances in rates and fares authorised by the Interstate Commerce Commission, the carriers are giving an excellent service all round at low charges. Their achievements are outstanding when compared with the confusion which attended railway operation under Federal control during the period from December, 1917, to March, 1920. It is surprising, therefore, to find that the National Resources Planning Board has recommended to President Roosevelt that a National Transportation Agency, with broad powers, should be established within the Federal government. This proposal would involve a strict measure of state control over all forms of transport and especially over the railways. There does not appear to have been any flaw in the recent record of the rail carriers which would justify interference with their working beyond the close regulation at present exercised by the Interstate Commerce Commission. It is unusual for early action to follow the submission of contentious reports such as that lodged by the National Resources Planning Board, but we may return to the discussion of its study of "Transportation & National Policy" at a later date if it seems likely to be treated as a serious contribution to the rebuilding of America's transport system.

"Pay-As-You-Earn"

FOR two years everybody in close touch with weekly wage earners has known that the present system of collecting income tax in respect of weekly earnings was doomed to crash sooner or later, when war production fell off and, with it, the general level of earnings. This is quite apart from the general bewilderment which the system must have caused in the minds of wage earners as a class. It has been obvious for a long time that the chances of collecting tax in arrear, from a worker whose weekly earnings drop from, say, £8 to £4, or even to nothing, would be remote. Nevertheless, Somerset House ran true to form, and a year ago armed the late Chancellor of the Exchequer with a White Paper proving that nothing could or should be done to make deduction of tax from earnings a current operation. What was good enough to collect tax from the salaried must obviously be good enough in principle for those who draw their money once a week.

However, time marches on, and such has been the pressure from all quarters that Somerset House has been compelled to eat its own words and produce another White Paper entitled "A New System for the Taxation of Weekly Wage Earners" (Cmd. 6469). This document shows our admirable Civil Service at its best—and its worst. Its power of drafting schemes which seem to be both watertight and the only possible solution remains undiminished. It is a tribute to its capacity in this respect that, until a few days ago, not a single word of criticism has been uttered in any responsible quarter about the White Paper scheme.

The object of any change in the present practice obviously must be to replace it by a system which appeals to the common-sense of the worker and does not merely re-create a fresh set of anomalies for his bewilderment. Thus, one would hardly have thought it worth while to go to the trouble of scrapping an existing working system if the new system would result often in an absence of any recognisable relationship between the week's earnings and the tax deducted. At the same time, particularly in the middle of the war, any new system should reduce the extra clerical labour—and paper—to a minimum.

That there is something wrong with the White Paper is sufficiently demonstrated by a letter from Messrs. A. T. Haynes and R. J. Kirton, which appeared in *The Times* of October 9. These gentlemen have previously attracted some public notice by directing attention to the relationship, previously ignored, of the Beveridge social security benefits to income tax reliefs. They are entitled, therefore, to a sympathetic hearing on the present occasion. They point out that under the White Paper system, and taking the official example based on "Code 33" (which relates to allowances aggregating £190), the following would be, on the basis of the figures quoted in the White Paper itself, the working of the scheme in certain quite ordinary circumstances:—

Week No.	Gross wage for week	True tax for week	Tax reduction per White Paper (page 17)
1	£ s. d. 9 10 0	£ s. d. 1 17 10	£ s. d. 1 16 0
2	9 9 0	1 17 5	1 2 0
3	9 8 0	1 16 11	2 3 0

They also point out that the above example is not extreme and that it appears that variations of as much as 18s. either

above or below the true tax may occur in any week. These deviations would, as they admit, tend to be compensated in subsequent weeks but—and this is the crux of the matter—the human consequences of such fluctuations need no emphasis. There would be endless queues seeking explanations at the pay-box and, at home, much domestic misunderstanding due to the vagaries of the pay-pocket. The fact that a week is the budgetary unit of time for wage earners has not yet been adequately recognised.

To overcome such anomalies, which would be quite inexplicable to the wage earner, and also cut somewhat the work imposed on employers, and particularly the amount of paper required in the form of hundreds of thousands of copies of the bulky tax tables contemplated by the White Paper, Messrs. Haynes and Kirton put forward for consideration an entirely new approach based on two simple but fundamental principles:—

- (1) For any given code number, that is, for any wage earner whose total allowances fall within a narrow range, the tax on a given weekly wage must be one of three amounts:—
 - (a) Nil, if he is, for tax purposes, below the exemption limit.
 - (b) One amount, if the employee is, for tax purposes, in the reduced rate area.
 - (c) Another amount, if the employee is, for tax purposes, in the full rate area.
- (2) Which of the three amounts is appropriate in any week for a particular wage earner is determined by reference to the total gross earnings from the beginning of the fiscal year to the end of the week in which the deduction is to be made.

On this approach the voluminous tax tables referred to in the White Paper would take a greatly simplified and curtailed form. Thus, the White Paper proposes that there should be prepared, for each code number, tables relating to each calendar week, and covering the full range of weekly incomes. Messrs. Haynes and Kirton propose, for each code number, two simple tables, each giving directly the week's tax corresponding to a given weekly wage and extending over the full range of weekly incomes—one for use when the employee is, for tax purposes, in the reduced rate area, and the other for use when he is in the full rate area. Such tables would be applicable whatever the calendar week.

To determine which table is to be applied to any employee in a given week, his total gross pay to date would be compared with the borderline figures which mark the exemption area, the reduced rate area, and the full rate area. These borderline figures would be printed in advance for the whole year on the tax deduction card, a separate set for each code number. Obviously, there would be very large numbers of taxpayers for whom the code numbers and so the borderline figures would be identical.

The work of the wages clerk on the tax deduction card each week would thus be:—

- (1) Enter the week's wages on the card.
- (2) Add the week's wages to the total gross wages up to the end of the previous week.
- (3) Determine from the printed figures on the card whether to use the reduced rate table or the full rate table—or whether the tax is nil. (In many cases this operation would be automatic.)
- (4) Enter the week's tax on the card.

It will be obvious that this procedure saves one of the operations set out in the White Paper, namely, that of arriving at the difference in the cumulative tax liability determined from the prepared tables for successive weeks in order to calculate the current week's tax liability. For a large pay-roll this would represent an important saving in time and eliminate a fruitful source of error.

The supreme merit of this alternative approach is that such anomalies as those referred to above, under which a marginal reduction in earnings may be accompanied by a heavy increase or decrease in the amount of tax deducted would be avoided, and the common object of all concerned attained, namely, the deduction of an amount of tax related as nearly as may be to the current week's earnings.

The White Paper is an ingenuous document, for by a deft selection of figures for purposes of the examples, the anomalies of the proposed system are slurred over. Thus, in Example B, the gross pay is never the same in consecutive weeks. It is only by comparing, say, weeks 7 and 11, in both of which the gross pay is taken to be £9 8s., that it is discovered that the tax deductions for these weeks would be respectively 43s. and 34s. Surely this is not "pay-as-you-earn"? Certainly, it is difficult to reconcile the above figures with the Chancellor's statement that the central feature of the scheme is that deduction of tax "keeps in step" with weekly earnings. Under Messrs. Haynes and Kirton's proposals the tax deduction would be the same in each of these weeks. To sum up, their proposals save labour, save a lot of paper, but, above all, give the right

answer. No wonder railwaymen are shuddering at the very thought of control from Whitehall!

♦♦♦♦

Standardised Couplings for all Rolling Stock

SOME readers of *The Railway Gazette* may have noticed (on p. 284 of our September 17 issue) that the new 4-6-2 Ministry of Supply locomotives for service on 3 ft. 6 in.-gauge railways in various parts of Africa had to be supplied with no less than five different kinds of automatic couplings, according to the territory in which they were intended to work. This, it was pointed out, was the result of the haphazard growth of railways in that Continent. In Great Britain we have now arrived at a more uniform state of affairs, though the number of varieties of couplings in use is still large.

Before any attempt to arrive at a decision on the best type of coupling is made, a thorough examination of the various kinds in use at home and abroad will be labour well spent. This would be the first part of the "research stage" of the problem, and should show how the various patented designs can be sifted until we are left with the comparatively few types which have passed into use on actual vehicles. A further sifting could then be made, in view of the influence of local conditions (gauge, climate, etc.), and in the end there might be, say, half-a-dozen types to be considered in detail, for the object in view. Assuming a centre coupling is held to be desirable, the respective merits of centre couplings which are complete in themselves, as contrasted with those which also involve buffing gear, would then have to be examined. The "buckeye" coupling, so widely used on the East Coast stock, is well worthy of consideration. In that type the buffing stresses are taken by the whole of the corridor connection, which being large, can absorb considerable shock, and has saved many lives, when telescoping would otherwise have occurred. Its drawback is the occasional jerking or surging when starting.

Freight trains today are of three main categories: (a) "piped" box wagons which can be operated from 50 to 55 m.p.h.; (b) partly braked trains; and (c) unbraked trains of 8-ton to 20-ton wagons having three-link chain couplings. If for any reason the fitting of improved couplings for freight vehicles had to be postponed, a partial reform at least could be effected by substituting chains of low-alloy steel, containing, say, 1½ per cent. manganese, and flash butt-welded, for the existing wrought-iron chain, which is too weak for its present duties, and deforms immediately it is put into service.

♦♦♦♦

A Maker of Railway History

IN last week's issue we could deal only very briefly with the death of Sir Guy Granet. On p. 416 we publish a record of his career and two "appreciations." In quite a number of respects Sir Guy Granet's career was very similar to that of Sir Eric Geddes. Both arrived meteor-like, and most unexpectedly into the British railway firmament. Their railway careers, their Government work in the 1914-19 war, and their adventures into big business after the war, were very similar. Both had dominating personalities, and neither cultivated the habit of "suffering fools gladly." When we hear disparaging remarks about some outstanding railwayman as one often did, for example, regarding Sir Henry Thornton (and in earlier days, Sir George Gibb, "and his ton-mile statistics") with the inference that given the same "good luck" the speaker could have "filled the bill" equally well, we invariably find that the critic has never even met the person criticised. If he had, he must have been impressed and realised that some men have it, and others haven't. We recall an axiom of the late J. P. O'Donnell, that this is a very fair world and people get exactly what they are worth. As he would remark: "If so and so is a successful bluffer he is worth what he gets. Just you try and do the same thing and see how far you'll get."

When Granet became General Manager of the Midland Railway in 1906 he found it an undertaking rather living on its past reputation. With the assistance of Cecil Paget, Frank Tatlow, William Towle, and other chief officers, in twelve years it became the most efficiently run British railway. As "Wyvern" in his "appreciation" remarks: "Granet could be masterful and when necessary, stern." In other words he had a temper. One of his officers once remarked to us: "It is much better to see him in the afternoon than in the morning." For a time he was very angry with this paper for suggesting that the new General Manager of the Midland had a great opportunity in emulating his great and far-seeing predecessor, Sir James Allport (who introduced third class on all trains in 1872 and abolished second-class two years after), by letting the Midland be the pioneer British railway to introduce third class sleepers. For quite a year all Midland advertisements in *The Railway Gazette* were stopped. However, third class sleepers came 22 years later.

A barrister by profession, Granet practised in the Northern Circuit for seven years and after the Railway Companies' Association was reconstituted he was appointed in 1900 the first salaried Secretary. It is generally understood that it was Samuel Beale, the Solicitor, then a great power behind the scenes in Midland affairs, who was so impressed with Granet's ability as to persuade the Midland board to offer him the General Managership in succession to John Mathieson. Twenty years later it fell to Granet to make a similarly bold and unusual appointment, that of Sir Josiah Stamp as President of the Executive of the London Midland & Scottish Railway. It is all past history now. Lord Stamp was tragically killed by enemy action over two years ago, and now we mourn the death of Sir Guy Granet. Therefore, we see no harm now in quoting from a letter he wrote to us pointing out what he considered an error in an editorial article dealing with the tragic death of Stamp:—

"... Thanks also for what you say on p. 468; the only thing I don't like is your finding a parallel between my resignation and Stamp's appointment, and Lord Dalkeith's resignation in favour of Mr. Whitelaw. The inference seems to be that an amateur was gracefully making way for an expert. Now with my years of General Managership (12) and Chairmanship subsequently of the Midland Railway, and then Deputy Chairman of the L.M.S., and finally its Chairman for 3 years, I don't regard myself as an amateur railway man.

"When I had been Chairman of the L.M.S. for some time, I came to the conclusion that the old organisation did not fit the changed circumstances. Finally, I came to the conclusion that if I could find a man of commanding personality and put him as supreme executive officer of the company, I then could, after allowing him a fair period of gestation, ask him to find a new organisation for the company. Accordingly, I had two problems, one comparatively easy—to find a title for the man, and then the supreme difficulty of finding the man. After a good deal of thought, and not with entire satisfaction, I hit on the title of 'President of the Executive.' Then, the difficult job of finding the man began. At last, after a good deal of thought, enquiry, and I admit with some of the spirit of a gambler, I hit upon Stamp. Then, and only then, I went to my Board and put the proposal to them at one of our private meetings after dinner.

"I may say I had considerable difficulty in getting their consent but eventually they agreed and I fixed up matters with Stamp, and agreed with him that his first job was to find a new organisation. This he did, and his new organisation with its executive committee came into being. It was because I saw what a really extraordinary success Stamp was making of his job, and I recognised his genius, that I came to the conclusion that he would find still more scope for his genius if he became Chairman. And for this reason, though I ascribed it to other work, I asked the Board to accept my resignation and elect Stamp. Again I may say that it was not plan sailing, but as is known, my resignation was accepted and Stamp was elected in my place."

It is, of course, a trite remark that little did Granet think in 1905 when he was selected for the General Managership of the Midland Railway, of the similarly surprising appointment he was to make twenty years later. But no doubt it was the remembrance of his own success that inspired him "with some of the spirit of a gambler." Until the last his interest in railway affairs never slackened. We shall miss the letters he wrote us from time to time, nearly always in his own handwriting. His last letter, dated September 5, began: "You keep me so well supplied with interesting and suggestive literature that you run the great risk of my sending you a letter every week."

SPECIFIC HORSEPOWER OF LOCOMOTIVES.—If the horsepower developed by a locomotive per ton of adhesive weight is excessive, maximum performance will be obtainable only at speeds beyond the normal operating range. According to an article by Señor Roman Martinez de Velasco in *Ferrocarriles y Tranvías* the electric locomotive with 60 to 70 h.p. per ton tends to excess, although the uniform turning effort enables the best use to be made of adhesion. The last locomotives constructed for the St. Gothard line in Switzerland develop 71 h.p. per ton of adhesion, a figure realisable only beyond 150 km.p.h. In Germany, 72 h.p. per ton is mentioned, but here a maximum speed of 225 km.p.h. is expected, so that this power will be needed on occasion. Señor Velasco thinks that for Spain 52 h.p. per ton is quite sufficient in an electric express locomotive. The corresponding figures given for mixed-traffic and goods locomotives are 42 and 34 h.p. per ton respectively. These powers are realisable at 80, 55, and 40 km.p.h. A B-B type goods and mixed traffic design weighing 75 to 80 tons and developing 3,000 h.p. would be powerful enough; it would be able to exert a pull in excess of the tensile strength of the drawhooks. Locomotives of the 1-B-B-1, 1-D-1, and 1-E-1 types, weighing 100 to 200 tons and developing 4,000-5,000 h.p. would meet express passenger train requirements.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

"Glories of the Past"

26B, Hermitage Road, Hitchin,
Herts. October 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—All those railwaymen who realise how much individuality, tradition, and "pride of the line" have been responsible for the inherited public interest in and affection for the railway industry, and how immense an asset is that interest and affection, will heartily endorse everything written in the excellent editorial in your issue of October 1.

Undoubtedly the amalgamations of 1923 sooner or later destroyed much in the way of individuality, such as distinctive locomotives, rolling stock, signals, buildings, colour schemes, coats of arms, and so on, but at least four great independent companies emerged from this railway enthusiasts' holocaust and in the seventeen odd years before the outbreak of war each had, in its own way, developed a distinctive personality and founded a tradition on the ashes of the old.

You ask whether the genial pre-war railway atmosphere will return after the war? In my view, the cherishing of what remains of that genial atmosphere at the present time and the encouragement of railway enthusiasts (most of whom are amongst the greatest champions the railways possess) should be one of the duties of every thinking railwayman, and they certainly constitute one of the primary responsibilities of the Public Relations Departments, handicapped though the latter are today by restrictions and conditions which can only be revealed when hostilities have ended and perhaps then only when the future of the railways has been settled.

I think it would be a safe bet to say that within a generation of further amalgamation "possibly not directed by railwaymen" (to quote your own words), the railways would possess about as much public affection as the Board of Inland Revenue.

Yours faithfully,

GEORGE DOW

What is Private Ownership?

Charles Roberts & Co. Ltd.,
Railway Wagon Works, Horbury Junction,
Near Wakefield. October 5

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have read with interest the letter in your issue of October 1, signed "Cross Bencher," and, with your permission, would like to comment upon some of the statements briefly, as follows.

The investment of capital can very well be left in the hands of those who have the capital to invest. They are generally wise enough to see that the men who are placed in charge of their capital are not incompetent, and in the long-run if they were then the capital and they themselves would very quickly disappear, which, in my opinion, is one of the merits of private enterprise, and more than offsets its failings.

Such public corporations as the London Passenger Transport Board, with a practical monopoly, have a comparatively simple task. If their undertaking does not pay we get the process which any ordinary individual can carry out under such conditions, that is, selling a penny stamp for twopence halfpenny, and, of course, in the long-run the consumer pays.

The driving force of industry under private enterprise is a very simple one, based on the slogan "Get on or get out," which some people may term a hard doctrine, but which I contend—again in the long-run—provides the greatest good for the greatest number, even though someone has to get out in the process.

Because some directors, as your correspondent puts it, "get their pockets stuffed with proxies," is no sound argument against private enterprise, and it is an unfair aspersion upon the integrity and the honesty of such men in the vast majority of cases.

I do agree with the concluding sentence of the letter. The cardinal weakness of bureaucratic undertakings is that in the vast majority of cases they neither get on nor get out, but seem to do their level best to prevent other people getting on.

There is, of course, a case for a certain amount of government control in all these matters. The problem is to ensure that the control does not destroy enterprise.

The following is a copy of an advertisement which recently appeared in *The Times*, which seems to throw a lurid light upon Mr. Morrison's suggestions with regard to post-war transport:—

"POSTAGE STAMPS AND BUS TICKETS

"In 1914 we had the penny post and the penny bus fare.

The penny post has gone, possibly for ever, but privately-owned omnibus undertakings still have the penny bus fare. Is it not significant that road passenger transport, so largely created and fostered by privately subscribed money, has succeeded where Bureaucracy has failed?

"Is it not proper to give credit to private enterprise for developing and maintaining an essential public service without asking the public to bear any greater part of the cost?"

Yours faithfully,

DUNCAN BAILEY,

Chairman & Managing Director

[As was pointed out in our September 17 issue, when a letter from Mr. Ian Mikardo in *The Manchester Guardian* was quoted on our "Scrap Heap" page, it is not fair to suggest that the only reason the penny post has gone up to 2½d. is inefficient working which has increased operating costs; in fact the increase is due primarily to the use of the postage-stamp as a tax-collecting medium. Mr. Mikardo asked what would have happened to the bus companies' argument if the Chancellor had chosen bus tickets (as he had chosen theatre tickets) as a revenue-gatherer as well as, or instead of, the postage-stamp?—Ed. R.G.]

Private Ownership in the Future

London, October 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—On Friday the whole evening after dinner was spent on *The Railway Gazette*. In a specially good number, I liked the article headed "Glories of the Past." It was up to the level of a *Times* fourth leader. Cross-Bencher's letter emphasises the point that an age of expert business management has come upon us. It is merely a development from the old days when General Managers like George S. Gibb and John Aspinall resented interference by directors, let alone stockholders. In this connection W. E. Simmett in his book on railway amalgamation gives an amusing quotation from the memo which accompanied the Railways Bill of 1921.

"The present Bill sweeps up masses of legislation which have accumulated in the years since railways were first sanctioned by Parliament, and it is believed that the relation of the State, the railway companies and the users, will be much simplified. The provisions of the measure will enable the railway companies to bring about economies long desired by the directors and management—will assure to the users reasonable facilities at reasonable rates, and will, by the provision of adequate cost and operating statistics, enable the proprietors to familiarise themselves with the management of their property, will give users and the Government an insight into the need for the charges they are asked to pay for the services rendered, and will give shareholder, employee, and community accurate data on which sound opinion may be formed as to the adequacy of the return on capital or remuneration of labour." (The italics are mine.)

One wonders whether railway companies get rid of dufters much quicker than the Civil Service does. Some blockheads have had a long run, it is to be feared, in privately-owned concerns as well as in Whitehall.

Yours faithfully,

LIBERATOR

The Sudan Railways in Wartime

Sudan Railways Department,
Atbara. August 10

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—You publish in your issue of July 9 on page 45 a paragraph entitled "The Sudan Railways in Wartime" which is misleading in certain respects. For instance a reader, if sufficiently interested to ponder over the paragraph, would certainly reach the conclusion that the Sudan Railways were only now, and as a result of wartime conditions, seriously embarking on the construction of rolling stock. In fairness to the broadcast from Radio Omdurman on November 11 last year, I do not think that listeners were left with quite such a limited impression of our capabilities. In an endeavour to dispel any unfortunate impressions that may have been formed, I give you a short account of the rolling stock we have built.

The Sudan Railways have built all new coaching stock placed in service since 1931, before which an increasing percentage of our coaching stock requirements has been met by local construction. Almost 250 vehicles have been turned out by the Atbara Works to date, including 7 sleeping cars, 4 dining and kitchen cars, 3 dining cars, 3 kitchen cars, and 1 combined sleeping, dining, and kitchen car; the balance consisting of 1st, 2nd, 3rd, 4th, and composite coaches, postal, and brake and baggage vans, saloons, service inspection cars, and enginemens' cabooses. For the last twenty-five years all wooden goods and service vehicles required have been built at Atbara, and limited

numbers of steel wagons and tank wagons from time to time have been constructed throughout. In the main, underframes have been imported, but underframes for both coaches and wooden wagons have been built in the past when conditions suited, and we are now equipped to meet all our needs by local construction.

To say that there is a wealth of timber close to the line is an overstatement and would, I think, surprise anyone who knows our hundreds of miles of desert track. "In some parts of this country wood is plentiful close to the railway line and along the navigable waters of the Blue Nile" were the words used in the Broadcast, which was, of course, delivered to listeners who know our rail and river services well.

Finally, versatile though we may be in meeting the exceptional demands of wartime, it has not fallen to our lot to furnish underwear for Fighting French or indeed any other nurses.

Yours faithfully,

C. R. WILLIAMS,
General Manager

[The information given in our July 9 issue was compiled from broadcasts from the Khartoum and Omdurman radio stations. We regret the impression that the building of rolling stock was a new development. The provision of the underwear for the Free French nurses should have been credited to the Stores & Ordnance Department.—Ed. R.G.]

Coaling Plants

October 9

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—May I, as a locomotive running man, venture to put before Mr. C. L. Lindley the facts as I see them? If I understand his proposal, it is to enable coal to be taken as easily en route as water from a trough, or nearly so. However, by the time the average engine has used a tender full of coal the fire needs cleaning, amongst other things, and it must come off its train. It may go into a siding or to a depot. In either case there will be a period of "idle" time. The length of this time is determined not so much by the servicing operations as by the safe margin of turnover time that must be allowed, to cover late running or other troubles. If the margin is too tight, there will be a late start to a subsequent train, or else another engine will have to be found, and spare engines of the right type, in steam, are seldom available, for obvious reasons.

It is not unknown in emergencies for an engine to be got ready again in under half-an-hour, but if complaints from the public and from the Traffic Manager are to be avoided it is advisable to legislate for a greater margin. I think that if Mr. Lindley examined some actual workings in operation today he would agree. If he suggests that locomotive "sub-depots" should be established at principal stations to avoid running engines to the running shed proper, I must point out that this would involve additional staff, the wages of which would offset the saving in other directions.

Mr. Lindley writes that the locomotive is the unit about which the whole fabric of the industry is built. I submit that the whole fabric is built on the timetables, passenger and freight, in which the public has a considerable voice. The locomotive running man must fit his engines and men to the timetables; modifications for his convenience are sternly discouraged.

Yours faithfully,

SHED SHUNTER

Camosan, Berks Hill,

Chorleywood, Rickmansworth,

Herts. October 9

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In his letter in your issue of October 8 Mr. Lindley maintains his advocacy of his container system of locomotive coaling but it seems to me that most of what he says was replied to in my former letter.

I cannot think it a practicable proposal that a crane and container wagon or wagons should be brought up to coal a locomotive while attached to its train. As already pointed out, traffic and servicing operations do not mix well.

The extra siding accommodation required for the container system in the vicinity of sheds is certainly an objection to it, varying in importance at different places. The coaling plant capacity of 150 tons given by Mr. Lindley is very much on the low side for many plants which run up to a hopper capacity of 600 tons.

It seems to me to be a strong objection to the container system that it involves full and empty wagon shunting every time a locomotive is coaled and coaling is certainly an operation requiring a multiplicity of movements as compared with the simple drawing off of coal on to the locomotive tender from a hopper.

As for "running all round the parish for fuel," I said the opposite; namely, that coaling plants were placed on the incoming or outgoing shed roads in which case no special running for coal is done at all. Judging from the mobility that Mr. Lindley wants to give to his container wagons and their crane, it is they whom he contemplates running all round the parish but whoever would think of locomotives taking coal at one place one time and another another time?

I pointed out in my previous letter that one of the objects of providing coaling plants and other special plant was to achieve exactly the desideratum Mr. Lindley cites, namely, to keep locomotives pulling trains to the maximum possible extent.

As for too little attention being given to the servicing of engines, I do not think Mr. Lindley can realise what has been done in this direction; for example, besides coaling plants, plant has been installed for dealing with ashes, for hot-water washing out, for the supply of soft water, to minimise, and facilitate the removal of, boiler scale, and so on.

Exactly the procedure that Mr. Lindley says he foresees, when the locomotive on its arrival at the shed will be fallen on by a gang of men whose job it is to have it back again in service at the earliest possible moment, has been extant for some 10 to 15 years, with the addition that the men have been assisted by the plants above cited.

Yours faithfully,

J. DALZIEL

L.M.S.R. "Royal Scot" Class Locomotives

Peterhouse, Cambridge

October 7

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The "Royal Scot" locomotive which visited North America was the third of the class to be built at Derby, that is, the one originally numbered 6152. This locomotive was re-numbered 6100 in readiness for the visit, the reason being, I believe, that the L.M.S.R. authorities desired to send overseas a machine made in their own shops, whilst retaining the name and number of the prototype.

The number 6152 may still be seen stamped on the motion and other parts of the present No. 6100 *Royal Scot*.

It will be recalled that a similar change of names and number took place when a "Coronation" Pacific was sent to North America, No. 6229, the latest built of the type, which assumed No. 6220 and the name *Coronation*. Unlike the *Royal Scot* this locomotive has had its original name and number restored since it returned to this country.

Yours faithfully,

ARTHUR F. COOK

Enginemen's Comfort

London & North Eastern Railway,

H Q 1 (via Hitchin). October 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In connection with your recent editorial on the above subject, it is worth recalling that two obstacles deferred the adoption of the roomy American type double-side window cab on British locomotives, namely, the view once held by many locomotive superintendents that if drivers were given too much comfort they might fall asleep on duty, and the objection of the enginemen themselves to being "closed in." Nevertheless, as early as 1860 the American cab appeared on two 4-4-0 locomotives built by Messrs. Stephenson for the Stockton & Darlington Railway, and 26 years later T. W. Worsdell began to provide this type of cab on North Eastern Railway engines.

Now a standard feature of L.N.E.R. locomotive design, it is a curious coincidence that the American cab had been adopted by every constituent company of the L.N.E.R. by the time amalgamation came, the last to do so being the Great Northern with its two class "A1" Pacifics, although it should be remembered that both the Great Northern and Great Central had possessed American-built 2-6-0 locomotives with such cabs at the beginning of the present century.

Other companies to employ the double-side window cab just before grouping were limited to the Lancashire & Yorkshire, Caledonian, and Glasgow & South Western (on its 4-6-4 tanks), the only other earlier examples that I can recall, apart from those on the lines that went to form the L.N.E.R., being the American-built 2-6-0 engines of the Midland and the 4-4-0 *Earl Cawdor* of the Great Western.

Regarding cab seats, can any reader confirm that these first appeared in this country with the advent of the American-built 2-6-0s referred to above?

Yours faithfully,

GEORGE DOW,
Information Agent

The Scrap Heap

London Flower Day collection in aid of the orphan fund of the National Union of Railwaymen, held on August 14, realised £3,734. After all expenses were paid, £3,220 was handed to the fund.

Figures issued by the Red Cross Penny-a-Week Fund show that in each of nearly 400 firms and organisations in England and Wales the employees have contributed over £1,000 to the fund. In 25 of these firms they have raised over £5,000. These contributors are responsible for £1,500,000 of the £7,000,000 raised so far. The largest individual total has been achieved by the L.M.S.R. staff (nearly £100,000).

BERLIN SAYS BRITAIN RATIONS TRAVEL

Great Britain has introduced points rationing for civilian rail travel, the German radio tells its listeners. "Lord Leathers, British Minister of Transport," the radio says, "has confirmed that because of shortage of coal and rolling stock every private traveller must from now on surrender points when he buys his ticket. The number of points depends on the duration of his journey and priority vouchers are no longer sufficient."

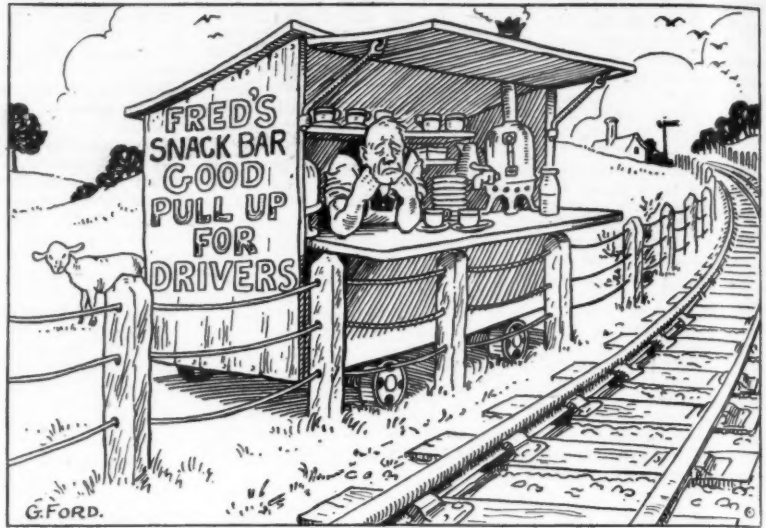
A friend of ours, some time ago, built a 7-mm. scale wagon from drawings published in the now-defunct and lamented periodical *The Railway Engineer*. The fact that the drawings were, as we ascertained, to the scale of $\frac{1}{16}$ of an inch to the foot did not worry our friend. He made a scale of feet and inches to suit the drawings and, using a second scale of 7-mm. to the foot, he just measured any dimension he wanted from the drawings and reproduced it to 7-mm. scale; and the result was a really fine model.—From *"The Model Railway News."* (*The Railway Engineer* was incorporated with *The Railway Gazette* in January, 1935).

INDIAN RAILWAYS' ADVERTISEMENT

An Indian railways' advertisement calls attention in large type to the fact that "The railways are doing a fine job; go all out to make it better still." It also mentions that the number of passengers carried daily is equal to the population of Calcutta or 1,700,000. "India's railways' first responsibility is towards the war," it continues. Some 20,546 wagons, including 3,408 coal wagons, are being loaded every day, an impressive performance of which any railwayman may well be proud. "We can, however, improve on it. The more we work the more munitions move towards the battlefield."

TICKETS FOR LOCOMOTIVE FUEL

In the 1860s, when American locomotive tenders were small, the railways at times furnished their drivers with tickets or tokens which could be used for the purchase of a load of wood or coal during the course of a journey if fuel ran low. The Sheboygan & Fond du Lac Railroad (which is now part of the Chicago & North Western Railway) used such a system and provided its locomotive drivers with tickets representing one-half cord of wood, one quart of lard oil, or half a ton of coal; a selection of such tickets was reproduced recently in our American contemporary *Trains*. It is



"Nil" return

explained that a driver "cruising along west of Plymouth, might find himself about to run out of fuel, so he'd stop at a farm and exchange a ticket for one-half cord of wood, enough to bring him into Fond du Lac. The farmer would then cash the ticket with the railroad management, and the fuel would be charged to the operating expenses of the appropriate locomotive as indicated on the ticket." On some railways in the U.S.A. similar tickets were used as a means of accounting for fuel and supplies drawn from the company's own stocks.

When it became known that Mr. Winston Churchill was in Quebec, there was much speculation throughout Canada as to how he had reached the capital. But men of the Canadian National Railways knew. They did not tell, although one of the first Canadians to greet Mr. Churchill when he set foot on Canadian soil was Mr.

R. C. Vaughan, Chairman & President of the system. They also knew when and how President Roosevelt and Mr. MacKenzie King would reach Quebec. The fact that there was no leakage of information, and that the many special trains required were operated without a hitch is a tribute to the railwaymen. The C.N.R. operated twelve "secret specials" and a number of other special trains, which together travelled 5,245 miles.

Mr. W. A. Gray, Chief of Tariff Bureau of the Grand Trunk Railway System of the Canadian National Railways, Chicago, Illinois, who recently retired, has sent a circular to many of his friends. In it he points out that it is not given to many to spend over half a century in one organisation. (His association with the Grand Trunk Railway System began on February 7, 1893, and ended on August 24, 1943.) His circular was displayed, and incorporated two verses, one at the top and the other at the bottom, of "Auld Lang Syne." It was addressed directly to his friends and associates in the C.N.R. organisation but also included many others with whom he had been brought into contact during his long service with the company.

FARTHER CHRISTMAS

To cut winter travel evacuated Civil Servants will receive no rail passes during the Christmas holidays and only two up to March 31 next.—From *"The Evening News."*

TAILPIECE

(Enthusiasm for railway matters persists in spite of wartime discouragement)

In days of peace when work was done
He paid his fare and sped,
With stop-watch set to time the run,
Towards an engine shed.

He loves to see them come and go,
So stately and so trim.
As horses to the horsy, so
An engine is to him.

The devotee of railway things
In good times and in ill,
Whatever changes peacetime brings,
May he be with us still.

E. C.



A poster recently issued by the L.P.T.B., designed by Mr. Bruce Angrave, urging the importance of starting for home before 11 p.m.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

INDIA

Railway Finances in 1941-42

At meetings of the Public Accounts Committee on August 26 and 27, it was stated that, during 1941-42, traffic receipts had amounted to Rs. 129 crores, and railway surplus to Rs. 28 crores, and that both figures were the highest recorded in the history of Indian railways. During the year, the Bombay, Baroda & Central India, and Assam-Bengal Railways had been acquired by the State. The total amount of Government capital invested in railways at the end of the year was Rs. 732 crores: Private capital amounted only to Rs. 22 crores, compared with Rs. 77 crores in 1924-25. The depreciation reserve fund at end of 1941-42 stood at Rs. 52 crores, exclusive of a loan due to it of Rs. 22 crores. The amount to the credit of the railway reserve fund was Rs. 6½ crores.

Railway Finances in 1942-43

The latest figures available for 1942-43 show traffic receipts of Rs. 154½ crores, and a surplus of Rs. 44 crores. The latter is Rs. 7½ crores more than was expected when the revised estimates were framed, but no portion of this excess has gone to general revenues; the amount has been credited to the railway reserve fund. Of a total track-mileage of 55,000, only 650 miles has been dismantled for military needs. The strategic lines, which always have been run at a loss, have shown profits for the first time in 1942-43.

UNITED STATES

C.T.C. on the Burlington

Within three days of the end of 1942, the Chicago, Burlington & Quincy Railroad brought into use a centralised traffic-control installation on the 40 miles of single track between Aurora and Steward Junction. This is a section of its main line between Chicago and the Twin Cities of St. Paul and Minneapolis, over which operate, among other trains, the Twin Cities Zephyrs, which, with their start-to-stop schedules of up to 84 m.p.h., are among the fastest trains in the world. The adjacent 8½ miles from Steward to Flag Center is double tracked and this has had C.T.C. equipment since 1929. As a result of the new installation, and despite the extremely severe weather conditions of last winter, the first seven months of working showed that freight trains moving through this territory had been speeded up from 10 min. to 2 hr. 11 min., with an average of 32 min.; that passenger-train times had been reduced by an average of 5 min.; and that two-thirds of all the trains now moved over this section with no delays whatsoever.

Nickel Plate C.T.C.

The New York, Chicago & St. Louis Railroad (known generally as the Nickel Plate Road) has been experiencing the benefits of its enterprise in installing centralised traffic-control to relieve single-track bottlenecks in its principal main line, from Buffalo southwards. This is double for 49 miles from Buffalo to Brocton, N.Y.; for 38 miles from Thornton Junction to Madison, Ohio; for 47 miles from Euclid through Cleveland to Kishmans; and for 45 miles from Kimball to Arcadia, Ohio. Three of the single-track gaps have been closed, in whole or in part, by C.T.C. equip-

ment, which is complete over the 15 miles between Westfield and North East; the 20 miles between Hadley and South Whitley; and the 21½ miles between Kishmans and Kimball. There are several interesting features about these installations, which were the work of the Union Switch & Signal Company. One is the colour-light switch-lamp, which gives a green indication in both directions if the switch is functioning normally, but shows red if it is being held open by some obstruction, thus indicating to a driver if the stop signal concerned is at danger because of a switch failure. Another is that the illuminated track-diagrams in the control room show not only track occupancy, but also the direction of running in which each train enters the occupied section; the occupancy lamps are lighted red by east-bound trains and white by westbound trains.

Delaware & Hudson Locomotives

For many years the Delaware & Hudson Railroad, although a relatively small line, has taken a leading part in locomotive development in the United States, and fifteen 4-8-4 steam locomotives recently supplied by the American Locomotive Company, from its Schenectady Works, continue this tradition. These engines, which are of striking appearance, with high smoke-deflecting wings at their leading ends, and simple lines, are intended to work over the 243 miles between Oneonta and Rouse's Point, N.Y. They have 6 ft. 3 in. driving-wheels and a rated tractive effort each of 62,040 lb. The maximum load an axle is limited to 30½ tons, and the adhesion weight on the four driving wheels has not been allowed to exceed 120 tons out of a total engine-weight of 209½ tons. The boiler of each carries a working pressure of 285 lb., and has an evaporative heating surface of 4,477 sq. ft., a super-heating surface of 1,473 sq. ft., and a grate area of 96 sq. ft.; cylinders (two) are 24½ in. dia. by 32 in. stroke, and the 12 in. dia. piston-valves, operated by Walschaerts motion, have a maximum travel of 7½ in. With the 12-wheel tender, accommodating 25 tons of coal and 20,000 gal. of water, the total weight of engine and tender in running order is 343 tons.

ARGENTINA

Wireless and the Railways

The Argentine Supreme Court has given judgment in favour of the Entre Rios Railways Co. Ltd., which had appealed against an ordinance issued by the Municipality of Paraná ordering the company to instal isolation filters in its power house, on the grounds that the working of the dynamos set up atmospheric conditions which interfered with the local broadcasting-services. The railway company contended that it was under no obligation to comply with the Municipality's requirements in the matter, as its machinery conformed in all respects to the conditions laid down by the National Railway Board. The case was taken to the courts by the Municipality, which invoked a local law on the subject; the railway company maintained that the question was one of national jurisdiction. The Superior Court of Entre Rios decided against the railway, which appealed to the Supreme Court. Although admitting the right of a municipality, or of a private party to complain if the services

of a railway operating under federal jurisdiction interfered with local broadcasting-arrangements, the Supreme Court ruled that the correct procedure was to approach the Department of Posts & Telegraphs, or the Ministries of War or Marine, according to the nature of the case, which were the only authorities empowered to deal with questions involving wireless telegraphy and telephony, as provided for by Laws Nos. 4404 and 9127 and the regulations relating to wireless communications of May, 1933.

SWITZERLAND

B.-L.-S. Results for 1942

The year 1942 proved an exceptionally favourable one for the Bern-Lötschberg-Simplon Railway Company. Despite increased working expenditure, a record working surplus was attained, as working receipts exceeded all previous figures. The following table shows the position of the company in this respect during recent years:—

	Working receipts	Working expenditure	Working surplus
	Millions of francs (approx.)		
1929	12	8	4
1935	9	7	2
1938	10	7	3
1939	12	8	4
1940	18	9	9
1941	21	11	10
1942	22	11	11

The number of passengers conveyed during 1942 was 4,300,000, against 3,850,000 in 1941; and passenger receipts rose to fr. 5,250,000 from fr. 4,780,000 in the preceding year. This was due mainly to the further curtailment of road traffic, to increased travelling by Swiss holiday-makers, and to heavy military traffic; the number of international passengers was small.

Goods traffic showed a slight decrease in 1942 compared with the record figure attained in 1941. The figures for the last five years were as follows:—

		1,595,000 metric tons.
1938	...	2,011,000 "
1939	...	3,259,000 "
1940	...	4,289,000 "
1941	...	4,248,000 "
1942

The decrease in goods traffic is accounted for partly by the fact that the Italian ports of Genoa and Savona no longer were available; but this was offset to a certain extent by the transit traffic between Germany and Italy. Internal traffic increased by reason of the curtailment of road traffic.

The company's share capital is unchanged at fr. 59,780,000.

CEYLON

Railway Police Unit

As a result of the increasing number of thefts from railway property, mention of which was made in *The Railway Gazette* of April 9, the formation of a separate police-unit for the railway is under consideration. Watchers employed to guard sheds and yards have not proved very successful and frequently the railway has had to seek the aid of the police in investigating thefts and in keeping guard. The latter has found it difficult to find men for this purpose. With the establishment of the proposed unit it would not be necessary for the railway to call on the main body of the police.

It is proposed that the railway police would be placed in charge of a superintendent, and would have its headquarters at Colombo. Detachments would be stationed at various centres. The question of the railway's share of the cost remains to be settled.

Measurement of Leakage from Steam-Using Appliances

Three steam hammers wasting coal at the rate of 116 tons a year

OBSERVATION of exhaust pipes has frequently shown that in plant such as steam hammers, steam pumps, and so on, leaks occur past pistons and valves. It is often difficult to stop this without upsetting production, and in order that the most serious leakages could be detected and rectified first it was decided to construct a simple and robust instrument by which the ordinary maintenance staff could quickly ascertain the actual amount of steam being lost. For this purpose the "flap" meter, shown in the accompanying illustration, was designed and constructed by the L.M.S.R. workshops at Derby; it is used as an aid to fuel economy wherever steam-using appliances are installed. In this meter a duct placed over the centre of the

off its curved undersurface from striking the lower part of the vane and affecting the readings. The vane is carried on small adjustable screws with pointed ends like miniature lathe centres; these engage small centre holes in each side of the vane so that it swings practically without friction. Fastened to the upper end of the vane at right angles to it is a light steel pointer which travels over a quadrant scale marked from 0-90°. Alternative vanes are provided, one of steel, which is used for relatively heavy discharges of steam, and the other of aluminium which, being lighter and more sensitive, is more suitable for measuring smaller discharges. If the exhaust pipe is not truly vertical the hoop can be adjusted on the pipe so that the pointer is over the zero mark on the scale when no steam is being passed.

Calibrated by Test

Although the main dimensions of the meter were obtained by calculation, the calibration was determined by actual test. If steam at any given pressure is applied to an orifice of definite size, the quantity of steam which passes in an hour is known within fairly close limits. When steam from this orifice is led up a pipe of known size it is therefore possible to calculate the quantity which is being discharged per square inch of pipe area in an hour, and this was the method used in calibrating the meter. Various sizes of pipes were used to determine if "scale effect" made any appreciable difference, and it was found that for all sizes of pipes tested the points lay on one and the same smooth curve. The meter can therefore be used for any size of pipe that will fit in the hoop provided that the entrance to the curved duct is kept over the centre of the pipe. It was also found that the height of the entrance to the duct above the top of the pipe made no difference for distances varying from 0-1 in.

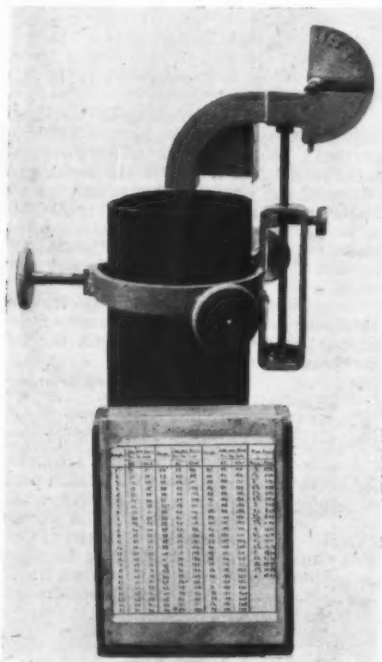
Using the calibration thus determined, a curve was made showing the relationship between the quantity of steam discharged per sq. in. of pipe area per hr. and the angles of deflection of the steel and aluminium vanes; a table showing this, with the areas of the different sizes of pipe, was pasted inside the lid of the box. By using this table it can be calculated that if, for example, the angle is 15° when using the aluminium vane the leakage is 40 lb. per sq. in. per hr.; if the internal diameter of the pipe is 3 in. the total amount of leakage is 280 lb. of steam per hr.

Estimates of the quantity of steam discharged will be affected by the dryness fraction; allowance was made for this when the calibration was carried out by using steam of approximately the same dryness fraction as the exhaust steam that the meter had ultimately to measure; for all practical purposes the readings are found to be sufficiently accurate under normal conditions.

The meter is, of course, suitable only for a steady discharge, and when making a test on a steam hammer the practice is to determine the amount of leakage when the hammer is held up by steam, and to make a further measurement when it is in the down position on the anvil with no

steam in the cylinder except that which leaks past the piston valve. A time study is then made to find out for how long it is shut off entirely; from this, and from the readings on the meter, a very close figure can be obtained for the daily loss of steam through leakage. A steam pump can be tested with the slide valve fixed in the middle position to determine the leakage past the valve, and the combined leakage past pistons and valves can be found by fixing the engine so that steam is applied to one side of the piston without producing movement. The instrument is also useful for measuring improvements effected by repairs; the knowledge that there is this possibility for definite measurement encourages millwrights to do a good job.

The meter has been in existence for only a short time, but already it has proved its usefulness. In one case it detected a leakage in an 8-ton steam hammer of no less than 10,000 lb. of steam per hr. while the hammer was working. In another case a leakage of 2,000 lb. per hr. was detected in a steam-operated drop hammer, and repairs since carried out have reduced the leakage by 80 per cent. At another works the meter was used to test a small 10 cwt. steam hammer, which was then fitted with a new piston valve. When it was tested again and a time-study of a typical day's work had been made it was found that there was a saving of 88 tons of coal a year for this hammer alone. As there are a number of similar hammers at these works the total saving will be considerable. At another L.M.S.R. works the meter showed that three hammers were wasting coal at the rate of 116 tons a year.



Simple flowmeter for measurement of leakage steam

exhaust pipe leads steam to impinge on a vertical swinging vane, which is deflected through an angle depending on the velocity of the steam issuing from the pipe. The instruments can be calibrated so that the readings give a sufficiently accurate measure of the quantity of steam issuing from the pipe in a given time.

As the illustration shows, the meter is provided with a hoop which encircles the end of the exhaust pipe; it has three clamping screws so that it can be used on a pipe of any size. Attached to the hoop is a vertical rod carrying the body of the meter. This rod can be raised, lowered, and clamped in any position so that the end of the duct can be adjusted to within approximately half-an-inch of the end of the exhaust pipe. The duct has a baffle to prevent steam deflected

Radio-Telephone Tests on L.N.E.R. Goods Train

Successful tests have been carried out with radio-telephone apparatus designed by engineers of Redifusion Limited and the L.N.E.R. to enable the engine-crews and guards of goods trains to converse during journeys.

Although most long-distance passenger-trains have corridors, and, in the case of some L.N.E.R. expresses, these extend through the tenders, thereby enabling guards to make direct contact with locomotive crews, matters are different in the case of a long goods or mineral train, where the enginemen and the guard may be separated by more than a quarter-of-a-mile of wagons.

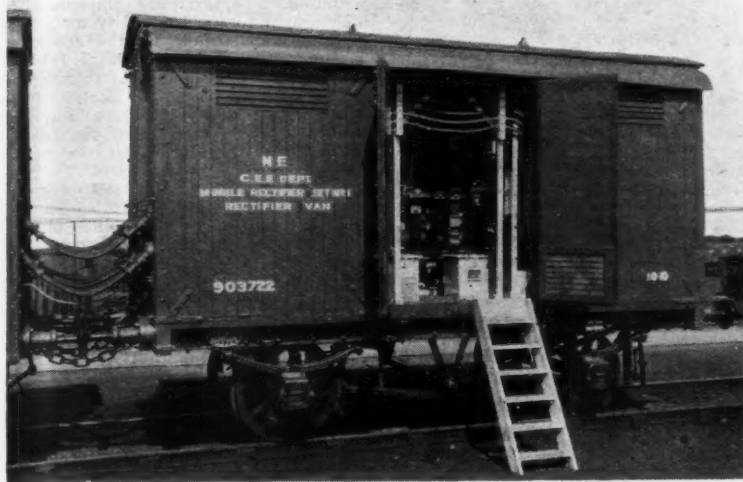
For some time the railways have realised the advantages of inter-communication facilities on moving trains, and between moving trains and ground staff; and, as it is not practicable in either case to effect connection by means of direct wires, radio methods have been tried.

Tests were carried out recently on a goods train of 52 wagons between Hornsey and Hitchin, and the apparatus was of such robust design that it withstood continuous vibration. Its simplicity makes it suitable for operation by anyone used to an ordinary telephone.

The new method of inter-communication on moving trains may not come into full use until after the war; but the experiments show that, even in the midst of present-day problems, useful work is being done by the railways in planning for post-war efficiency.

L.N.E.R. Mobile Electrical Substations

Rectifier and transformer sets in standard 12-ton covered wagons



of one 500 kVA transformer, together with the necessary h.t. switchgear to control the incoming supply, and l.t. a.c. switchgear to control the outgoing a.c. supplies. In both the mobile rectifier and mobile transformer sets racks are provided to carry the spare e.h.t. and l.t. fuses.

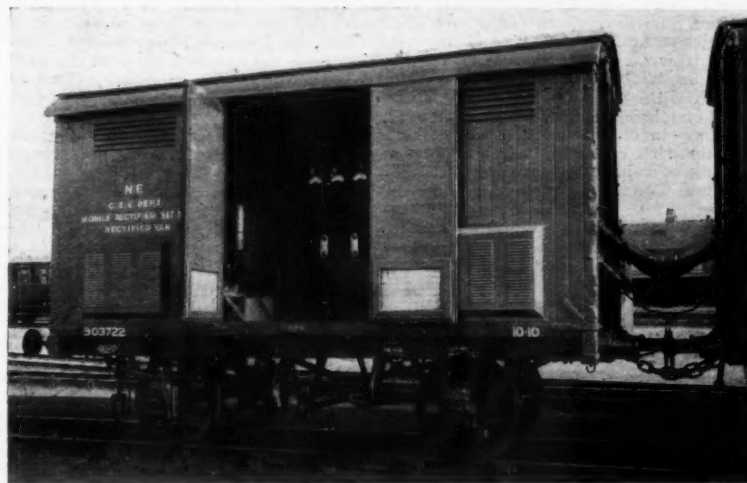
The electrical equipment in the mobile rectifier sets was supplied by the General Electric Co. Ltd., and that in the mobile transformer sets by Johnson & Phillips Limited, to the requirements of Mr. H. W. H. Richards, Chief Electrical Engineer, L.N.E.R. The alterations to the covered goods wagons in which the electrical equipment has been erected were carried out by the staff of Mr. E. Thompson, the company's Chief Mechanical Engineer. The wagons are painted the L.N.E.R. standard service-vehicle dark blue with white lettering, and, stationed at strategic points on the system, are ready for use at a moment's notice.

SOUTHERN RAILWAY HOP-PICKING TRAFFIC.—The hop-picking season just concluded created a record for the Southern Railway, when 320 special trains were run conveying 135,000 persons to and from the hop-fields. In addition, over 20,000 pickers travelled by ordinary trains over a period of six weeks.

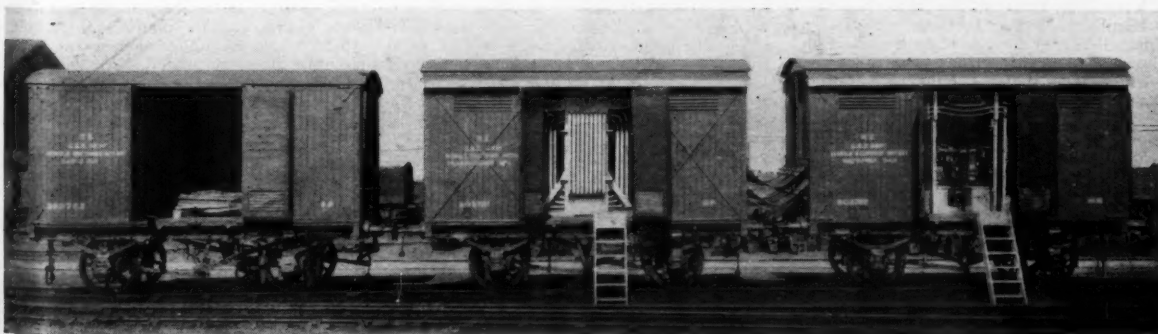
TO supply electricity to the main locomotive, and carriage & wagon works, and for general railway purposes in the event of air raid interference with local substations, the L.N.E.R. has built a number of mobile rectifier and transformer sets. The electrical equipment for these sets has been mounted in standard 12-ton covered goods wagons, which have been modified for the purpose by strengthening the floors and providing ventilating openings at the cant rail and elsewhere.

Each of the mobile rectifiers is rated at 500 kW. and consists of a transformer and two pumpless steel-tank rectifiers, together with the necessary h.t. and l.t. switchgear. The rectifiers can be connected in series or parallel to provide a 3-wire or 2-wire direct current supply, depending on requirements. The transformer and h.t. switchgear are mounted in one wagon and the rectifiers, with the d.c. switchgear, are mounted in another, which is semi-permanently coupled to the first. To complete the unit a third wagon is provided which contains e.h.t. cables and l.t. cables for making emergency connections, together with joint boxes and jointing material, and so on.

Each mobile transformer set consists



Rectifier van with front doors open showing the front of the d.c. switchboard and part of one of the steel tank rectifiers. Note how anode connections are brought from transformer van to rectifier van



Mobile rectifier set with back doors open

The Railways of the U.S.A.

Interstate Commerce Commission's report on transport in the United States during the year to October 31, 1942

(See editorial article, page 403)

THE 56th annual report of the Interstate Commerce Commission, submitted to Congress on November 2, 1942, reviews the business of all classes of transport in the United States during the period November 1, 1941, to October 31, 1942. The previous report (see *The Railway Gazette* of March 6, 1942) dealt at some length with "Transportation and National Defense," and with the effect of the influx on the railways and other means of transport of the enormous extra volume of traffic arising out of the measures taken by the Government for the national defence and aid to allies. On the formal entry of the country into the war, the President, by Executive Order No. 8989, December 18, 1941, established the Office of Defense Transportation and defined its functions and duties. This action was taken by virtue of his constitutional and statutory authority as President and Commander in Chief of the Army and Navy. The President directed that "in the study of problems and in a discharge of its responsibilities, it shall be the policy of the Office of Defense Transportation to collaborate with existing departments and agencies which perform functions and activities pertaining to transportation and utilise their facilities and services to the maximum." Particularly this liaison was directed with "the United States Maritime Commission for the consideration of problems involving relations of ocean shipping with coastwise and intercoastal shipping and inland transport; with the Interstate Commerce Commission on problems of rates, routing and car service; and with the War and Navy Departments with respect to the strategic movement of troops and supplies by domestic transportation carriers." The term "domestic transportation," as used in the Order was defined as including "railroad, motor, inland waterway, pipe line, air transport, and coastwise and intercoastal shipping." By a later Executive Order, No. 9156, dated May 2, 1942, the functions of the Office of Defense Transportation were widened to include all rubber-borne transportation facilities, including passenger cars, buses, taxicabs, and trucks (lorries). Commissioner Joseph B. Eastman (Chairman of the Interstate Commerce Commission) was appointed

Director of the Office of Defense Transportation.

The only statutory powers delegated to the Office of Defense Transportation which affect the work of the Commission are those vested in the President by Sections 1 (15) and 6 (8) of the Interstate Commerce Act. The first of these provides that "in time of war or threatened war the President may certify to the commission that it is essential to the national defense and security that certain traffic shall have preference or priority in transportation, and the commission shall, under the power herein conferred, direct that such preference or priority be afforded." The second provides "that in time of war or threatened war preference and precedence shall, upon demand of the President of the United States, be given over all other traffic for the transportation of troops and materials of war, and carriers shall adopt every means within their control to facilitate and expedite the military traffic."

The first of these delegated powers, that created by Section 1 (15) which applies in connection with concurrent action by the commission, had not, at the date of the report, been utilised by the Office of Defense Transportation. Considerable use has been made of the second power created by Section 6 (8). That provision has been interpreted as self-executing, without the aid of any of the powers conferred on the commission. It appears to be regarded not merely as authorising the issue of specific preference orders to the carriers, but as including power also to compel them to adopt operating practices necessary in the view of the Office of Defense Transportation to assure the preference and precedence to military traffic. Simultaneously, the commission has undertaken to administer the emergency powers committed to it under Section 1 (15) and those more recently provided in the Second War Powers Act, while endeavouring to avoid duplication and conflict with respect to similar functions being exercised by the Office of Defense Transportation.

The report states that thus far the domestic transportation agencies of the country have met the wartime demands on them. This success has been due largely to the fact that their physical

plant and equipment had been maintained in good condition during the period immediately before the entry by the country into the war when labour and materials were available, and to the further fact that carriers and shippers have worked diligently and harmoniously to promote economy in the use of transportation. Carriers and shippers alike have sought to avoid necessity for a comprehensive and direct Federal control of transportation such as that of 1917-20. The only step taken in that direction so far, when the President in March, 1942, directed the Office of Defense Transportation to take possession of the Toledo, Peoria & Western Railroad, grew out of a condition local in nature.

During the year ended October 31, 1942, 227 applications were filed for permission to abandon 3,535 miles of railroad lines or the operation thereof. The commission granted 184 applications, of which 58 were contested, involving 1,887 miles of branch line of Class 1 carriers, together with 430 miles of so-called short lines, of which 304 miles constituted the entire lines of the applicants and 126 miles were portions of such lines.

Total operating revenues of all common carriers subject to the jurisdiction of the commission are given in the report as \$8,675,313,000 for the 12 months ended June 30, 1942, compared with \$7,680,412,000 for the calendar year ended December 31, 1941. Corresponding figures for steam railways are given as \$6,428,000,000 and \$5,540,956,000. The accompanying table gives complete figures from other sources for Class 1 railways for the calendar years 1940 and 1941:—

	1940	1941
Route miles open ...	233,670	231,971
Passenger and freight train miles ...	873,488,512	968,567,535
Passengers carried ...	452,920,914	485,398,965
Passenger miles (thousands) ...	23,762,359	29,350,229
Freight, revenue tons ...	1,843,289,714	2,280,266,851
Freight, revenue ton-miles (thousands) ...	373,253,197	475,072,001
Operating ratio, per cent.	71.90	68.53
Freight revenue ...	\$ 3,537,149,646	\$ 4,447,568,333
Passenger revenue ...	417,268,960	514,687,032
Total operating revenues ...	4,296,600,653	5,346,699,977
Operating expenses ...	3,089,417,209	3,664,232,230
Net railway operating income ...	682,133,478	998,255,787
Net income after charges ...	188,851,151	499,765,138
Dividends paid ...	159,314,900	185,845,723

The return earned by Class 1 railways upon their aggregate property investment was 3.75 per cent. in 1941, against 2.59 per cent. in 1940. It should be noted that for every dollar of dividends paid out in 1941, taxes amounted to \$2.94.

VITREOUS ENAMEL FOR RAILWAY USE.—Members of the Institute of Vitreous Enamellers met for lunch, and to read and discuss papers on various aspects of their work, at the Waldorf Hotel, London, on October 9. Mr. J. T. Gray, of Stewart & Gray Limited, London, in a stimulating paper on "Post-War Prospects and Developments," showed many openings for the use of vitreous ware. Railway platform-structures, such as buffets, waiting rooms, and kiosks, were, he said, possible developments—indeed, in his opinion, the railways offered a very wide scope for an expansion in the use of vitreous enamel. Although a certain amount of enamel had been employed in the interiors of coaches of some types, for example, for the major fittings of main-line buffet-cars, only a small fraction of the potential use for enamel in

railway rolling-stock construction had been exploited. Mr. Gray said that from personal discussions with designers and technicians on passenger coaches, he could confirm that their attitude was favourable to the consideration of vitreous enamel for both the exteriors and the interiors of coaches.

HURST, NELSON & CO. LTD.—Lt.-Colonel Arthur N. Forman, the Chairman, in the course of his address at the 35th annual general meeting, said that scarcity of materials and labour, the rigid control of machine tools, and the difficulty of interrupting production in present conditions, had prevented the company from carrying out certain work on plant and buildings. It had been possible, however, to effect a number of alterations and to introduce some new plant which was now in opera-

tion. Provision had been made also for the cost of repairs to plant and buildings which would be undertaken as and when circumstances permitted. Wagons stood in the balance sheet at £394,065, which included further cost incurred by the addition, principally, of new wagons built under arrangement with the Ministry of War Transport and representing the company's participation in a scheme sponsored by that Ministry to augment the number of requisitioned wagons to meet increasing transport demands. The continuing heavy demands for the output of essential materials had been met in a manner which proved that there had been no falling off in the determination of the works manager, foremen, and employees to contribute a maximum effort in the maintenance of supplies.

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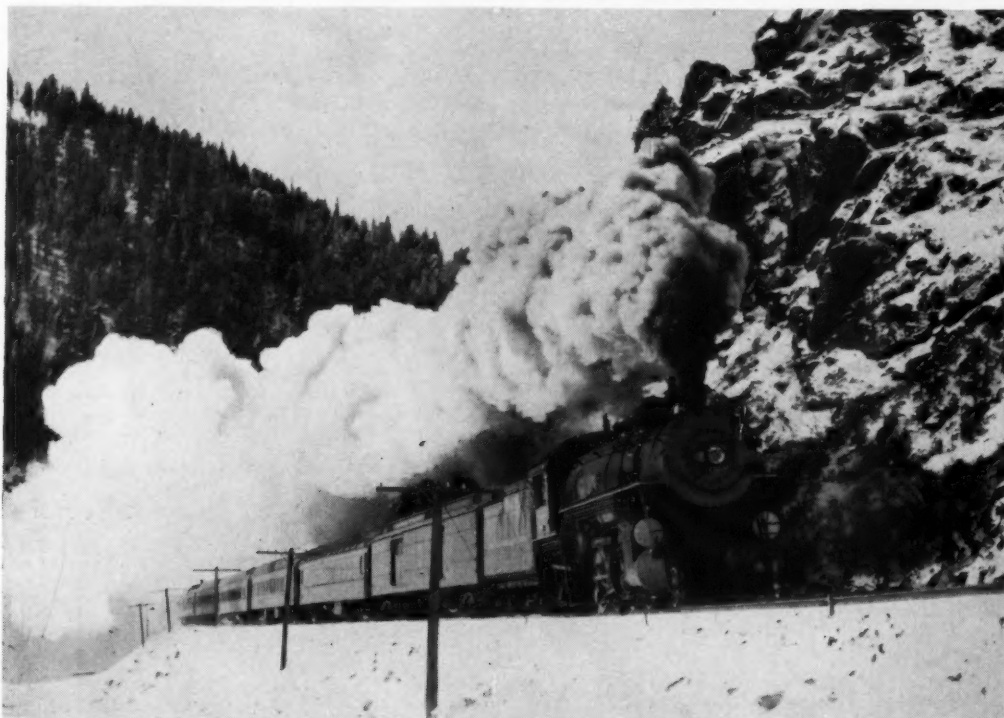


Photo]

[R. H. Kindig

Union Pacific 4-12-2 No. 9039 leaving Denver, with 31-wagon freight train for Laramie, Wyoming

These locomotives have three high-pressure cylinders, with derived motion for the inside cylinder. The adhesion weight is 166 tons, out of a total engine weight of 230 tons. The tractive effort is 96,650 lb.

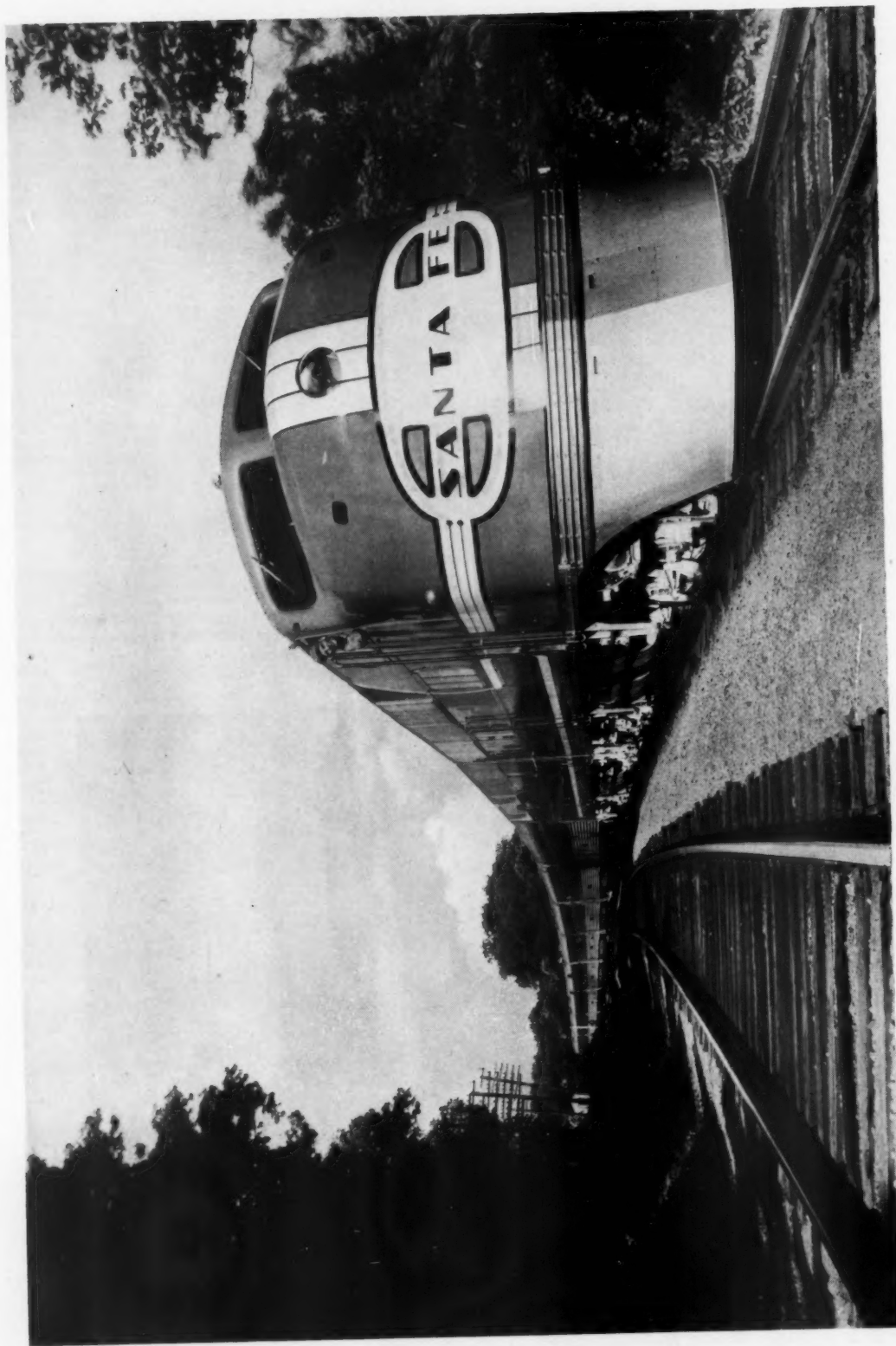


Photo]

[R. H. Kindig

Denver & Rio Grande Western Railroad—2-8-2 locomotive No. 1207 hauling the Panoramic Limited in Byers Canyon, west of Sulphur Springs, Colorado

This scene is typical of the magnificent country through which the "Dotsero cut-off" line (Moffat Tunnel route) passes, in threading its way through the Rockies



THE SUPER-CHIEF DIESEL-ELECTRIC STREAMLINE TRAIN, ATCHISON, TOPEKA & SANTA FE RAILWAY

The normal schedule for this twice-weekly express over the 2,227 miles between Chicago and Los Angeles is 39½ hr., but as a war measure the time has been increased to 41½ hr., including stops. The fastest run on the peacetime schedule is La Junta to Dodge City, 202.4 miles in 155 min., at 78.3 m.p.h.

RAILWAY NEWS SECTION

PERSONAL

LONDON & NORTH EASTERN RAILWAY

The board of the London & North Eastern Railway Company has agreed, at the request of the Minister of War Transport, to release temporarily Mr. R. J. M. Inglis, Divisional General Manager, Scottish Area, for important Government services overseas.

During the absence of Mr. Inglis, Mr. T. F. Cameron, Assistant General Manager (Works & General), will act as Divisional General Manager, Scottish Area, and Mr. H. W. H. Richards, Chief Electrical Engineer, in addition to his own duties, will act as Assistant General Manager (Works & General).

Mr. James Bridger, M.B.E., D.C.M., Stationmaster, Victoria, Southern Railway, who, as recorded in our October 8 issue,

In April, 1928, Mr. Bridger was appointed Yardmaster at Norwood marshalling yard and Selhurst depot. He was appointed Stationmaster at Guildford in 1935, also taking charge of Wanborough, Worplesdon, and London Road Stations, and became Stationmaster at Victoria in June, 1938. Mr. Bridger was appointed a Member of the Order of the British Empire in the New Year Honours List in January last.

Mr. R. White, M.C., District Locomotive Superintendent, Saltley, L.M.S.R., who, as recorded in our October 15 issue, has been appointed District Locomotive Superintendent, Motherwell, served an apprenticeship with the former Glasgow & South Western Railway, partly in the running sheds at Dumfries and partly at the workshops and drawing office, Kilmarnock. He joined the London Scottish in 1914 and served with that regiment throughout the war, spending

five Superintendent, and served in every district on the system. Mr. Huggins then was posted as Personal Assistant to the Chief Mechanical Engineer and subsequently spent two years in the Personnel Branch. After five years as Divisional Rolling Stock Officer at Rawalpindi, he was appointed Divisional Mechanical Engineer at Karachi. In 1936 he became Deputy Chief Mechanical Engineer, Maintenance, the position which he now leaves after nearly 30 years' service with the N.W.R. (See editorial note, page 401).

Mr. W. B. Dawson, M.Inst.T., who, as recorded last week, has retired from the position of Chief Superintendent, Transportation, Rhodesia Railways, commenced his railway career on the former Cape Government Railways, and, after passing the Cape Civil Service examination in 1899, was posted to the General Manager's



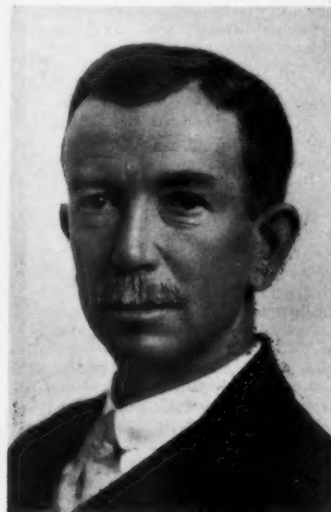
Mr. James Bridger

Appointed Assistant Divisional Superintendent, London Central Division, S.R.



Mr. R. White

Appointed District Locomotive Superintendent, Motherwell, L.M.S.R.



Mr. W. B. Dawson

Chief Superintendent, Transportation, Rhodesia Railways, 1934-43

has been appointed Assistant Divisional Superintendent, London Central Division, entered the service of the former London Brighton & South Coast Railway in August, 1904, as a telegraph learner at London Bridge, and afterwards served as a signal lad in several of the signal boxes in the London Area. In 1907 he was appointed Clerk to the Chief Goods Inspector at East Croydon, and in 1910 was transferred to the Special Traffic Section in the office of the Superintendent of the Line at London Bridge. At the outbreak of the war of 1914-19, Mr. Bridger was transferred to the Military Section for dealing with troops and munition trains for overseas. From 1916 he served in France in the Royal Engineers as Sapper, and attained the rank of Warrant Officer Class I; he was also awarded the Distinguished Conduct Medal. On return to civil duties in 1919, Mr. Bridger was transferred to the Freight Train Section, and on the amalgamation of the railways was appointed to a similar section in the London (East) Division of the railway at London Bridge. In June, 1927, he was appointed Assistant Stationmaster at Victoria, Southern Railway, and in July, 1928, Deputy Chief of Freight Train Section, Traffic Manager's Office, Waterloo.

the years 1916-18 in France. He received a commission in 1915, attained the rank of Captain, and was decorated with the M.C. and Bar. In 1919 Mr. White re-entered the service of the G.S.W.R. in a supervisory capacity at Girvan. His subsequent appointments have been: Assistant Locomotive Foreman, St. Enoch, 1920; District Locomotive Foreman, St. Enoch, 1922; Assistant to District Locomotive Superintendent, Polmadie, Corkerhill, St. Enoch, 1928; District Locomotive Foreman, Ayr, 1930; Assistant to Divisional Superintendent of Motive Power, Glasgow, 1935; and District Locomotive Superintendent, Saltley, February, 1939.

Mr. H. W. Huggins, Deputy Chief Mechanical Engineer, North Western Railway (India), who, as recorded in our September 24 issue, has been granted leave preparatory to retirement on grounds of ill-health, received his early training at Derby Works and gained further experience with the British Westinghouse Electric & Manufacturing Co. Ltd. in Manchester, and with Vickers Limited in Sheffield. He was appointed an Assistant Locomotive Officer on the N.W.R. in January, 1914, and later was promoted to be District Locomo-

Office, Cape Town. In 1908 he was appointed Secretary of the Cape Harbours Commission; on the formation of the Union, he was transferred to the Assistant General Manager's Office, Bloemfontein. From 1913 until 1918 he was associated with the operating section of the General Manager's Office, Johannesburg; in the latter year he became Trains Clerk at Durban, and in 1925 was promoted Chief Clerk. A year later he was appointed Superintendent, Operating, Durban, and in 1927 became Manager of the then newly-formed Tourist & Travel Department. He was selected subsequently to reorganise the Central Operating Control at headquarters, Johannesburg, with the title of Superintendent, Rolling Stock Control. In 1934 Mr. Dawson joined the Rhodesia Railways as Chief Superintendent, Transportation.

The Rt. Hon. the Viscount Ridley, who has been since 1942 Regional Controller for the North, Ministry of Production, and who is a Director of the London & North Eastern Railway Company, has been appointed Chairman of the inter-departmental committee set up to review rent restriction. Lord Ridley was Chairman of the previous committee on the subject.

Sir Guy Granet

Sir Guy Granet, G.B.E., whose death we recorded last week, was a Director of the London Midland & Scottish Railway Company, of which he had been Chairman from 1924 to 1927. William Guy Granet was born on October 13, 1867, and was educated at Rugby and at Balliol College, Oxford. He was called to the Bar at Lincoln's Inn in 1893, and practised for some years on the Northern circuit. In 1892 he married Florence Julia, the second daughter of Lord Selby, formerly Speaker of the House of Commons, and she survives him. He received a knighthood in 1911 and was created G.B.E. in 1923.

In 1900 he succeeded Sir Henry Oakley as the first salaried Secretary of the Railway Companies' Association. During his tenure of that position he gained experience of the problems of railway policy and management. There were then about 40 railway companies which were members of the Association. Granet evidently made so good an impression, particularly on the late Mr. Samuel Beale, that in 1905 he was offered and accepted the Assistant General Managership of the Midland Railway, with the reversion of the General Managership in succession to Mr. John Mathieson, who retired a year later. His experience as a barrister stood him in good stead and he was an excellent expert witness before Parliamentary Committees. At that time the Midland Railway possessed 1,396 miles open to traffic; 2,926 locomotives; 5,397 carriages; 117,674 wagons; and 8 steamboats. For the year 1906 gross earnings of the company were £12,106,313; expenses were £7,503,865; and net earnings amounted to £4,647,738.

Granet took a leading part on behalf of the railways in negotiations associated with the railway strike of 1911, and during the war of 1914-19 he rendered many special services. He was Controller of Import Restrictions in 1915; Deputy-Director of Military Railways at the War Office under Sir Eric Geddes in 1916; and Director-General of Movements & Railways, and a member of the Army Council, in 1917. He was Chairman of the British & Allied Provisions Commission, and representative of the Ministry of Food in Canada and the United States of America, in 1918; and in 1921-22 he was a member of the National Economy (Geddes) Committee. He resigned the General Managership of the Midland Railway in 1918, and was elected a Director. He became Chairman, in succession to Mr. Charles Booth, in 1922, and was made Deputy-Chairman of the London Midland & Scottish Railway Company on its formation. In March, 1924, he succeeded Lord Lawrence of Kingsgate, on the latter's retirement, as Chairman. Sir Guy Granet retired from the Chairmanship in 1927 in favour of Lord Stamp, but retained his seat on the board.

In 1911-14 he was a member of the Royal Commission on the Civil Service; and on the invitation of the Minister of Railways & Harbours, Union of South Africa, in 1933, he accepted the Chairmanship of the commission which reported on the working and management of the South African Railways & Harbours. Sir Guy Granet was for a number of years a member of the firm of Higginson & Company, merchant bankers; and at the time of his

death was on the boards of the Central Argentine Railway Limited, Associated Electrical Industries Limited, Lloyds Bank Limited, the Times Publishing Co. Ltd., the Provident Mutual Life Assurance Association, and other companies.

Appreciations

The Editor of *The Railway Gazette* has received the following letters of appreciation:—

Railwaymen who were associated with the late Sir Guy Granet, G.B.E., knew him

to those around him was his practice, on occasions when he found it necessary to disagree with an officer's view, of explaining his reasons. He would take great pains in this respect, particularly with the younger members of his staff, and in this and many other ways his attitude to those around him was kindly and helpful: he appreciated and took great pleasure in recognising and rewarding merit and enterprise. He was ever loyal to his staff and they, in turn, served him with devotion. He was a man who commanded more than confidence and respect, and to serve under him was an enviable privilege.

Sir Guy was asked once what type of man did he consider made the ideal leader, and he replied "the benevolent despot." If, in this, Sir Guy had in mind the sort of man which those around him knew him to be, many would agree with him.—"WYVERN."

Many of the older generation of railwaymen remember the buzz of excitement in railway circles when a quite young and unknown man, Guy Granet, succeeded Sir Henry Oakley as Secretary of the Railway Companies' Association. Moreover, it soon became apparent that the new Secretary was a brilliant man destined to fill much higher posts, and five years later came his appointment as Assistant General Manager of the Midland Railway. The following year he rose to be General Manager of that company. Thereafter he played an outstanding part in all matters of railway policy and development in the consideration of which his trained and very brilliant intellect was ever apparent. Always ready to consider new developments (e.g., train control), he raised the Midland Railway to the forefront of efficiency. To all matters affecting the railways as a whole he devoted his great ability, notably in the labour agitation which resulted in the introduction of Conciliation Boards in 1907.

In the early days of the last war he was largely responsible for the agreement whereby negotiations for improved conditions of service were suspended for the duration of the war. Later he was in intimate contact with Mr. J. H. Thomas in arranging the basis of war wages. But when his country needed him, he devoted his whole time to war work as Controller of Import Restrictions, Deputy-Director of Military Railways, and Director-General of Movements & Railways. After the war he became Chairman of the Midland Railway Company, and when that line was incorporated in the new London Midland & Scottish Railway Company, in 1923, he was appointed Director, and subsequently Chairman, of the company. Everywhere he left his mark, and it was a matter of some surprise and regret when his major activities were transferred to the City. To the end of his life, however, he took the keenest interest in railways and railway affairs.

I was closely associated with him on many occasions, an outstanding one being the general strike of 1926. He was then Chairman of the Railway Companies' Association, and in that capacity I was indebted to him for much wise counsel. Still later it was largely due to his persuasive eloquence that I became Chairman of Associated Electrical Industries Limited. Sir Guy was the possessor of a warm heart



Elliott

[G. Fry]

The late Sir Guy Granet

Director, London Midland & Scottish Railway Company, 1923-43. Chairman, 1924-27
General Manager, Midland Railway, 1906-18

for a great leader, with a strong, but yet a charming, personality and with a most sympathetic outlook in all matters affecting the well-being of the enormous staff under him.

The progress made by his old company, the Midland, under his leadership is too well-known to need recounting here, but perhaps many do not realise—because he never courted the limelight—the great part which Sir Guy played in bringing about that progress.

He had little, if any, use for anyone who showed a disposition to rely on and follow precedent and past practice without consideration of possible and perhaps better alternatives. To all railway problems he brought a keen and scientific mind, a remarkably quick and brilliant brain, and sound judgment, with the result that many new and improved methods were adopted not only in railway operation in all its branches, but in the handling of financial and other equally important affairs.

He could be masterful and, when necessary, stern, but was always ready to listen, and one of the things which endeared him

and genial personality which brought him many friends. But there were occasions when he could display the most vigorous indignation and express his displeasure or opposition in strong terms. Always, however, one felt instinctively that—even when one did not agree with him—his logical, analytical mind had grounds for his attitude, and such differences only served to heighten one's respect and affection for him. He was a loyal colleague and friend, and in his passing the country has lost a fine example of one who was in the best sense of the phrase—a thorough gentleman.—FELIX J. C. POLE.

Sir William Y. Darling has joined the board of Bruce Peebles & Co. Ltd.

We regret to record the death on October 17, at the age of 61, of Dr. W. H. Hatfield, F.R.S., Technical Research Director of Thos. Firth & John Brown Limited. He was a Vice-President of the Iron & Steel Institute, and a member of the Iron & Steel Research Council. He had lectured in the U.S.A., and had contributed many scientific and technical papers to the Royal Society (of which he was elected a Fellow in 1935) and other institutions. His presidential address to the Sheffield Society of Engineers & Metallurgists, which he should have given on October 16, had been postponed because of his illness.

To fill the vacancy caused by the death of the Rt. Hon. Reginald McKenna, Mr. Stanley Christopherson, Chairman of the Midland Bank Limited, has been elected a Director of the North of Scotland Bank Limited.

We regret to record the sudden death, while attending a council meeting of the Public Transport Association in London on October 14, of Mr. Orlando Cecil Power, Director & Traffic Manager of the Birmingham & Midland Motor Omnibus Co. Ltd., and a Director of many associated bus companies. A portrait and biography of Mr. Power were published in our issue of March 5 last. (See editorial note, page 402).

The late Mr. A. P. Strohmeier, who was a Director of Turner & Newall Limited, and of J. W. Roberts Limited, left £294,095.

We regret to record the death on October 12, at the age of 79, of Mr. Frank S. Sharp, who retired in 1929 from the position of Controller of General & Sheet Metal Stores, Manchester, L.M.S.R. He entered the service of the former Lancashire & Yorkshire Railway in 1879, and became Chief Clerk, Stores, in 1907; he became Storekeeper of the system in 1919. On the amalgamation of the L.Y.R. and L.N.W.R. in 1922, Mr. Sharp was made Divisional Storekeeper, Manchester; he was appointed four years later to the position which he held until his retirement.

Mr. A. R. Dunbar, A.M.Inst.T., Acting District Superintendent, Manchester, L.N.E.R., who, as recorded in our October 15 issue, has been appointed Acting Assistant Superintendent (Eastern Section), Southern Area, joined the former North British Railway in 1920, and later was selected by examination for special training as a traffic apprentice. He commenced his association with Manchester when, in 1928, he was appointed Assistant Yardmaster at Guide Bridge; after three years he became Deputy Chief Controller in the Manchester L.N.E.R. Control Office at London Road Station. In 1933 he went to the Central

Control Office, London. In 1935 Mr. Dunbar was made Yardmaster, Sheffield, and in 1936 he became Assistant District Superintendent, Manchester, which position he held for nearly four years. He was District Superintendent, Leeds, for two years before taking up, in 1942, the position which he now vacates. Mr. Dunbar has been for some time an active member of the Manchester Railway Post-War Planning Committee, and he has rendered to Manchester valuable help in problems of transport.

INDIAN RAILWAY STAFF CHANGES

Mr. E. Ingoldby, C.I.E., has been confirmed as Chief Controller of Standardisation under the Railway Board as from April 16.

Mr. L. N. Flatt, C.I.E., V.D., has been confirmed as Director, Mechanical Engineering, Railway Board, as from April 16.

Mr. W. Blake, V.D., has been appointed to officiate as Financial Adviser & Chief Accounts Officer, B.B.C.I.R., as from March 15. Mr. A. P. S. Bell has officiated as Deputy Chief Accounts Officer as from that date.

Mr. M. Robertson, Deputy General Manager (Personnel), E.I.R., has been granted 19 months' leave preparatory to retirement as from April 1.

Mr. H. G. Jones, Deputy Chief Mechanical Engineer, E.I.R., has been granted one year's leave preparatory to retirement as from April 9.

Mr. F. J. De Souza has been appointed to officiate as Deputy Chief Engineer, N.W.R., as from April 3.

Mr. A. P. R. Grindley has been appointed to officiate as Divisional Superintendent, N.W.R.

Mr. C. A. Mackey has been appointed to officiate as Deputy General Manager, Oudh & Tirhut State Railway, as from April 14.

Mr. T. G. Creighton, Deputy Chief Controller of Standardisation, has been appointed to officiate as Controller of Imported Railway Stores, Railway Board, as from May 3.

Mr. W. A. Nightingale has been appointed to officiate as Deputy Chief Controller of Standardisation in place of Mr. Creighton.

Mr. R. C. Ivey has been appointed to officiate as Chief Transportation Superintendent, G.I.P.R., as from April 16.

Mr. W. L. Kermack has been appointed to officiate as Deputy Transportation Superintendent (Repairs & Maintenance), G.I.P.R., as from March 23.

Mr. F. G. Griffith, O.B.E., E.D., has been appointed to officiate as Chief Commercial Manager, E.I.R., as from May 14.

Mr. R. B. Gibson has been appointed to officiate as Deputy Transportation Superintendent (Power), G.I.P.R., as from May 15.

Mr. S. S. Vasist has been appointed to officiate as Deputy Transportation Superintendent (Movement-Coaching), G.I.P.R., as from May 17.

Mr. C. R. Grey has been appointed to officiate as Superintendent, Mechanical Workshops, N.W.R., as from June 11.

Mr. W. M. McGregor, on return from leave, has been reposted as Controller of Stores, N.W.R.

Khan Bahadur Z. H. Khan has been appointed to officiate as Deputy Chief Commercial Manager, N.W.R.

At the quarterly meeting of the Automobile Research Committee of the Institution of Automobile Engineers, held at Caxton Hall on October 13, Mr. John Shearman, M.I.Mech.E., M.I.A.E. (Road Motor Engineer of the L.M.S.R.), was re-elected Chairman of the committee for the

year 1943-44, and Mr. A. G. Benstead, M.I.A.E. (Rotax Limited), was re-elected Vice-Chairman.

The late Lt.-Colonel Edwin Kitson Clark, who was a Director (formerly Chairman) of Kitson & Co. Ltd., and a former President of the Institution of Locomotive Engineers, and of the Institution of Mechanical Engineers, left £9,364.

CENTRAL ELECTRICITY BOARD

The Central Electricity Board has appointed Mr. E. J. Edgar, District Manager for the North-East England Grid Scheme Area, to be its District Manager for the Central Scotland & South Scotland Areas, in succession to Mr. A. E. MacColl, who takes up his new duties as Deputy-Chairman & Chief Executive Officer of the North of Scotland Hydro-Electric Board at the end of October.

The Board has decided to combine the Mid-East England and North-East England Areas for administrative purposes under Mr. V. A. Pask, its present District Manager for Mid-East England.

BRITISH ENGINEERS' ASSOCIATION

At the thirty-first annual general meeting of the British Engineers' Association, on October 14, the Council was re-elected for the ensuing year. At the subsequent council meeting Mr. Cecil Bentham was thanked for his services during the past year, and was re-elected President of the Association.

INSTITUTE OF TRANSPORT

Among those who have passed the examinations for 1943 of the Institute of Transport are:—

Associate Membership, Parts 1 & 2: Messrs. D. M. Colquhoun (Oflag VII B), A. F. Fielding (Oflag IX A/H), G. F. Luther (Oflag VII B), and J. N. Robinson (Oflag VII B), L.M.S.R.; L. A. Dennis (London), G.W.R.; R. W. Wheeler (Oflag VII B), Southern Railway; G. Forrest (Bulawayo), Rhodesia Railways; and W. T. Fenn (London), Ministry of War Transport (with honours).

Associate Membership, Part 1: Messrs. W. G. Hinam (Leeds), L.M.S.R.; F. H. Conway (Glasgow), L.P.T.B.; and P. W. R. Marston-Clark (Nottingham), Ministry of War Transport.

Associate Membership, Part 2: Messrs. N. J. Cooper (Birmingham), G.W.R.; H. R. Leeds (London), L.N.E.R.; and M. E. Constant (Oflag VII B), Southern Railway.

Graduateship, Parts 1 & 2: Messrs. N. J. Cooper (Birmingham), and W. R. Veryard (Stalag 383), G.W.R.; I. E. Garfield (Oflag VII B) (with honours), B. Pass (Stalag 383) (with honours), and B. O. Wildman (Nottingham), L.M.S.R.; L. R. Breadmore (London), L.N.E.R. (with honours); R. E. G. Brown (Stalag 383) (with honours), L. E. Carpenter (Stalag 383), M. E. Constant (Oflag VII B), P. T. Knight (Oflag VII B), and R. W. Wheeler (Oflag VII B), Southern Railway; and C. J. Greenway (Lagos), Nigerian Railway.

Graduateship, Part 1: Messrs. D. H. Butcher (Stalag 383), and W. E. Prue (Glasgow), L.M.S.R.; and E. J. Corke (Stalag 383), and T. W. Pascoe (London), Southern Railway.

Graduateship, Part 2: Messrs. D. A. F. MacGregor (London), G.W.R.; D. J. Hasell (Johannesburg), and R. Westerman (Leeds), L.M.S.R.; F. West (Manchester), L.N.E.R.; and R. Gibson (Buenos Aires), Buenos Ayres Great Southern Railway.

TRANSPORT SERVICES AND THE WAR—212

Civilian Air Raid Casualties in September

The Ministry of Home Security has announced the following figures of civilian casualties due to air raids in the United Kingdom during the month of September:

Killed (or missing believed killed) ... 5
Injured and detained in hospital ... 11

The casualties are classified as follow:—

	Men	Women	Under 16
Killed (or missing believed killed) ...	2	1	2
Injured and detained in hospital ...	4	6	1

The First Conductress?

Some interest has been taken recently, both in the daily press and also in the road transport technical press, to the priority claims of various organisations regarding the employment of women conductors in the last war. In the London area it would appear that the first bus conductress was engaged by Thomas Tilling Limited on November 1, 1915, but the provinces were slightly earlier in the field. The late Mr. O. Cecil Power, Traffic Manager of the Birmingham & Midland Motor Omnibus Co. Ltd., informed us that his company had two sisters who were appointed conductresses, and who began work on October 25, 1915. Even earlier, a tram conductress was engaged by the Nottingham Corporation Tramways Department on September 20, 1915. Subsequent correspondence revealed at least 7 earlier employers of conductresses as follow:—

Glasgow Corporation Transport, April 12, 1915
Preston Corporation Transport, May 19, 1915
Yorkshire Woollen District Transport Co. Ltd., June 8, 1915
Yorkshire Traction Co. Ltd., June 28, 1915
Northern General Transport Co. Ltd., July 22, 1915
Wolverhampton Corporation Transport, August 28, 1915
Maidstone & District Motor Services Limited, September 18, 1915

Probably the first of all was a woman employed by the Blue Motor Company in Wales in September, 1914, but this was not on heavy urban work.

London Transport Aircraft Production

In some disused passages at one of the London tube stations, a special factory has been established to produce aircraft parts. It is manned by London Transport railway staff doing part-time shifts, after normal hours. The factory is open, for part-time workers, five evenings a week from 5 p.m. until 11 p.m. The workers are allowed to settle the hours that they will work within these limits and they average about 3½ hours a shift. The work undertaken covers the production of complete instruments, including all machining operations and assembly; and also some intricate electrical wiring. The winding of coils for dynamo equipment and the assembly of fuse bases are also now being undertaken.

The workers in this underground factory volunteer to do one or more periods of work during the evening every week. A large proportion of the staff comes from the signal department of the London Passenger Transport Board, and considerable numbers from the office staff, both at head office and outlying establishments. Volunteers from the permanent way department, the building department, and the lift and escalator section are also employed. A special store has been established in the factory for handling the components and materials required, and also for the safe keeping of tools and equipment. This store work is manned by volunteers from the stores department, also after their normal periods of duty. All the part-timers are paid at a flat hourly rate. They sign on when

entering the factory and off when leaving, and submit a time sheet covering the period worked. The number of workers varies from evening to evening, but is always considerable. In a recent week the total hours amounted to nearly 3,000.

The supervision of the work is undertaken by members of the technical staff and the supervisory staff of the London Transport signal department, who also work on a voluntary basis. The principal assistants of the signal department take it in turn to assume charge of the factory for the evening. In addition, each of them is charged with the responsibility of arranging one section of the work. Members of the supervisory staff assist them in their respective sections. The result of this arrangement is that these principal assistants give up one whole evening to the factory every week, and approximately two hours for every other evening in the week, to see that the work begins smoothly and without hitch. The volunteers from the supervisory staff work from one to three evenings a week each.

Some full-time staff works a day shift and another a night shift. The limited number of machines available can thus be kept in service practically throughout the twenty-four hours, and provide the machined parts necessary for the assembly work carried out in the evenings. Full-time tool setters are on duty throughout the whole period the factory is working. This factory was established in June, 1942, with only some 10 or 11 workers an evening. From this small beginning there has been steady expansion. The present factory would accommodate a staff about twice as large as that now using it, so the number employed is being built up as the various sections of the work can be organised.

Dublin-Liverpool Air Service

Some indication of the heavy demand this summer for passenger transport across the Irish Channel is given by the recently-issued figures relating to the Dublin-Liverpool air service operated by Aer Lingus Teoranta (Irish Air Lines) in association with West Coast Air Services Limited. The passenger returns for the month of July constitute a new record in the history of the two companies. A total of 1,347 passengers was carried in July (775 by Aer Lingus and 572 by West Coast), against 1,055 by the two companies

during the same month of last year. The number of miles flown for the month was actually less by 1,220, showing a total of only 17,362, against 18,582 for the same period in 1942. The number of flights scheduled was 54 and all were completed, giving a percentage regularity of 100. The number of seats offered for the month was 1,398 and the total number of seats sold amounted to 1,302, giving a percentage utilisation of 93.13.

Priority Rail Traffic in Brazil

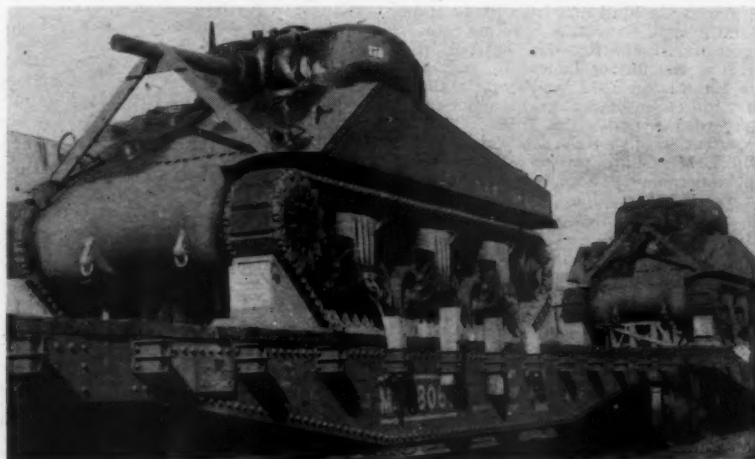
The Brazilian Government is stated to be drawing up a list of priority rail traffics in the states of São Paulo, Rio de Janeiro, Minas Geraes, and Espirito Santo, and in the Federal District.

Reduced U.S.A. Air Line Fares

From July 15 several important air lines in the United States made reductions in their fares, ranging from 5 to 17 per cent. It is denied that this reduction is a competitive device to secure business, but is credited to the increased number of passengers carried in each plane, and the more intensive use of equipment. The changes follow proceedings taken by the Civil Aeronautics Board to decide whether there should be a reduction in plane passenger fares. The companies concerned are United Air Lines, American Air Lines, Inc., Transcontinental & Western Air, Inc., and Braniff Airways; no alteration is made by Northwestern Airlines, Inc., whose charges have always been lower than those of the other companies mentioned. For coast-to-coast flights the rate has come down from \$149.95 to \$138.85; from Chicago to New York there is a reduction from \$44.95 to \$38.85; between Chicago and the Pacific Coast \$100 is charged instead of \$105; Chicago to San Antonio, Texas, costs \$59.50 instead of \$61.85; and between Chicago and Kansas City there is a reduction from \$21.50 to \$20.85.

Russian Railway Construction Awards

Two recent U.S.S.R. Governmental Decrees have granted awards to rail workers for construction enterprises. For their work in constructing the North Pechora railway, 714 persons received Orders and medals. This line, which is 1,150 miles long, extends from Konosha (on the Archangel railway), through Kotlas, to Vortuka. The building of the railway and the successful development of the Pechora coal basin has been carried out since 1940. The Pechora coal basin is in the Komi Autonomous



General Sherman M4 tanks in a yard of the New York Central System awaiting loading on a vessel for Europe

Soviet Socialist Republic. The second Decree granted Orders and medals to 546 workers under the People's Commissariat for Internal Affairs for the successful construction during 1942-3 of new railways on the right bank of the Volga, connecting Stalingrad with Volsk, and Ulyanovsk with Sviyazhsk.

Russian Railwaymen Decorated

Some 10,000 men and women railway workers have been awarded orders and medals by the Soviet Government for bravery and skill in their work during the war.

The Orient Express

According to a Paris radio announcement, an International Railway Conference has been held in Bratislava. At this it was decided to operate the Orient Express via Hungary instead of Croatia (Jugoslavia). Doubtless the successful activities of the Yugoslav Army of National Liberation in interrupting railway communications is responsible for this.

German Control in Roumania

During the past few weeks there has been a dearth of news concerning transport conditions in Roumania, whence until recently a considerable volume of information, official and otherwise, has come. At the beginning of September, there were strong rumours of important movements of German troop trains in and through Roumania, and it was reported that a German (Falkner von Sonnerberg) had been appointed General Manager of the Roumanian State Railways. Since that time, all Roumanians wishing to travel by rail have had to apply for special permits.

Higher Demurrage in Bulgaria

With a view to easing the shortage of wagons in Bulgaria, measures were recently taken by the State Railways to expedite the turn-round of rolling stock. Considerably increased demurrage fees were introduced on June 25. The following rates are now in force for each hour or part of an hour beyond the period for which no charge is made: during the first 24 hours Leva 80, the next 24 hours Leva 100, the third 24 hours Leva 120, the fourth 24 hours Leva 160, the fifth 24 hours Leva 240, and the sixth 24 hours Leva 300 for every hour begun. For every hour or part of an hour in excess of the sixth 24 hours Leva 400 is charged.

Unloading of Coal Wagons in Canada

In a statement issued recently, the Transport Controller, Dominion of Canada, points out that "open-top hopper-bottom" wagons suitable for the carriage of bituminous coal are in short supply, and that, in view of the continuous demands for facilities for the transport of coal and other war supplies, difficulty is being experienced in coalfields in securing sufficient vehicles to keep the mines in operation.

Instructions have been issued to all importers, wholesalers, coal dealers, and industrial users to the effect that all coal wagons must be unloaded as soon as placed on their sidings. Instructions have been given to the railway companies to report to the Transport Controller any violations of these directions.

Hungarian-Occupied Serbia

An article in *Die Deutsche Zeitung in Kroatien* has discussed Hungarian transport problems in the Serbian territories which Hungary annexed in 1941, and the following account was given by the Hungarian Ministry of Transport. So far, 1,129 km. (about 700 miles) of track have been repaired. These lines had been either severed in many places, or the rails taken away. The Serbs destroyed 68 bridges, of which 2 were over the River Danube,

2 over the Tisa, 5 over the Drava, and 3 over the Morava. The damage done to these bridges has been estimated at over 50 million Pengoes. Up to the present time, 39 bridges have been repaired, with a total length of 3,200 metres; 60 per cent. of these bridges were 100 metres or longer. Smaller viaducts and bridges have been repaired.

Moscow-Leningrad Railway

The Moscow-Leningrad Railway almost doubled its wagon loading during the two months of June and July. In addition, it effected economies amounting to 13,500 tons of coal during the second quarter of this year. This line has received the Railway Emulation Banner for the third time. Many of its workers have been decorated for their part in the defence of Leningrad.

Railway School for Latvia

A railway school is being opened this autumn at Valka (on the Tallinn-Riga main railway where it crosses the frontier between the two countries), according to a report received through a neutral source. In addition to courses in railway operation, there will be special courses for men intending to take up locomotive repair work, such as turners, boiler makers, and smiths. Courses will extend over two years. In pre-war days, Valka had the distinction of being located in two countries, Estonia and Latvia, the frontier halving the little place. Accordingly, there were two frontier stations, Valka Estonia and Valka Latvia. The two countries, in addition to Lithuania, were unified under German rule in the "Ostland."

Norwegian Sabotage

Fewer details become available of patriot opposition to the German occupying Forces in Norway than in some other occupied countries, but occasionally indications make it clear that the Germans are not enjoying the use of Norwegian transport without opposition. According to the Stockholm paper *Aftonidningen*, at least 70 German soldiers were killed and many more were injured when a German troop train was wrecked by the destruction of a railway bridge on the Oslo-Drammen line on October 9. It appears that the locomotive and two or three carriages passed across safely, but that the collapse then took place, and the remainder of the train fell into the river below and was destroyed. The Oslo-Drammen railway is an electrified main line running from the capital towards the south-western coastal regions.

Malmö-Copenhagen Service Nationalised

The Öresund Dampskibsselskab, of Copenhagen, a joint Danish-Swedish company established in 1900 for the operation of the Öresund shipping service between Copenhagen and Malmö, was taken over on July 1 last by the Swedish and Danish State Railways jointly. Of the company's capital of Danish Kroner 2,000,000, shares to the value of Kroner 1,200,000, or 60 per cent. of the total, were taken over by the Swedish State Railways, and the balance by the Danish State Railways. The fleet, which passed into the ownership of the railways, included the four large steamers *Malmö*, *Sverige*, *Helsingborg*, and *Öresund*. The company's personnel, as well as the buildings at the Malmö quay and in the Havnegade at Copenhagen, were also taken over.

The Danish shareholders of the company intend establishing a new company to work local services between Copenhagen and the well-known bathing resort of Klampenborg, to the north of the capital, as well as to Bellevue, as these services were not included in the transfer.

The Battle for Communications in Jugoslavia

The fighting between the German army of occupation and the Yugoslav Army of National Liberation has developed into a struggle for the control of vital communications throughout Jugoslavia. This fight, although covering the entire Yugoslav territory, is intense on some sectors, while on others it is practically only sabotage. In Croatia, Slovenia, Dalmatia, and Slavonia the partisans now control large sectors through which pass vital communication lines to the German Forces in Italy. One of these is the Zagreb-Karlovac-Ogulin-Susak railway by which the Germans are trying to reinforce their armies both in Dalmatia and in Istria. This line has been cut in at least 40 places and there has been no traffic on it for several weeks past. Since the reoccupation of Split, which was held by the partisans for 18 days, the Ogulin-Sibenik-Split line has been rendered useless. In order to assist their advance towards Trieste, the partisans cut the railway linking Ljubljana (Slovenia) with Austria and Hungary.

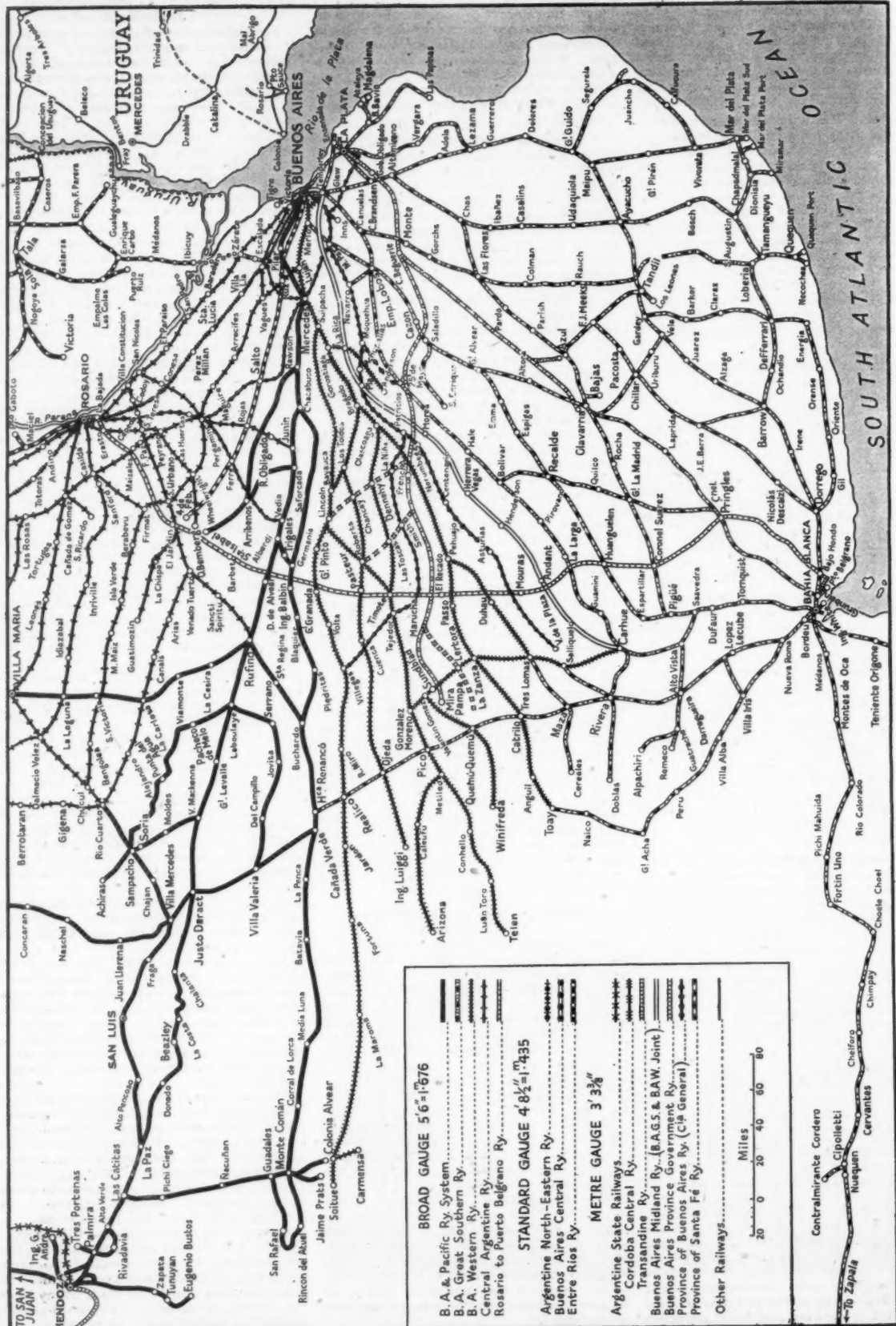
In Slavonia, Croat guerrillas attacked the railway linking Belgrade with Zagreb; 4 bridges were destroyed and 4 miles of line were removed. A train was blown up costing the Germans 109 officers and men killed. It is on this line that the Germans were sending supplies to their troops in Serbia and Montenegro. The 157th German Brigade, which had the special duty of guarding the railway between Zagreb and Belgrade, suffered heavy losses in a recent attack by the partisans. Between the stations of Ruma and Indija a train was derailed; the locomotives and 23 wagons were completely destroyed, and more than 150 Germans lost their lives. An armoured train was ambushed in the Osijek-Nasice line and destroyed. In one recent week, five main-line passenger trains were attacked on the Orient Express route, and the through Berlin-Sofia train was twice dynamited in Croatia.

In Eastern Bosnia, the town of Gorazde was captured by the Second Division of the People's Liberation Army. Thus, the Belgrade-Sarajevo railway, the only line which the Germans could use to bring reinforcements to their units trying to reach the Adriatic coast, was cut. In general, however, the activities of the patriots in Bosnia and Montenegro are confined to sabotaging bridges, tunnels, and lines.

Altogether, of more than 600 important railway stations in Jugoslavia, only about 122 are still in working order; the rest have been destroyed.

From reports reaching London from Jugoslavia it appears that the German High Command has decided to withdraw from many sectors in order to protect railway lines and larger towns. This move has not so far proved very successful, as the patriots now control all vital communications in Croatia, Slovenia, Bosnia, and Dalmatia.

The activities of the patriots are not confined to Jugoslavia, as strong forces recently crossed the Italian border in Slovenia and attacked Gorizia. They even went as far as Trieste. The Germans admitted that there had been fighting in those regions and claimed that they were able to push the patriots back. What the Germans did not admit, however, was that the patriots continue to control the gateways to Trieste, Gorizia, and Fiume, and also that all the railway lines to these towns have been destroyed. The only way the Germans can move in Istria now is by road, which they are trying to protect by strong army formations supported by Tiger tanks.



The intensive network of railways to the west of Buenos Aires. Both gauges and ownerships are indicated. A smaller-scale map of the whole railway system of Argentina was published at page 331 of our issue of October 1

Questions in Parliament

Condition of Railway Stations

Commander Sir Archibald Southby (Epsom—C.) on October 13 asked the Parliamentary Secretary to the Ministry of War Transport whether his attention had been called to the uncleansed condition of railway stations, particularly in London, and of the passenger rolling-stock generally; and whether, in view of the fact that dirt spreads disease, steps could be taken to cleanse and disinfect platforms, railway carriages and, particularly, train lavatories.

Mr. P. J. Noel-Baker (Joint Parliamentary Secretary, Ministry of War Transport) wrote in reply:—The railways do their best with the limited staff and materials at their disposal to keep their trains and stations clean. Their difficulties are, of course, increased by the very heavy passenger traffic with which they have to deal. If Commander Southby has any special case in mind, I shall be glad to make inquiries, but I would ask for his assistance in reminding the travelling public that it can greatly help by using the salvage containers which the railways provide, instead of scattering its litter.

No Railway Passes for M.P.s

Mr. D. L. Lipson (Cheltenham—Ind.) on October 13 asked the Secretary to the Treasury if, with a view to saving paper and the labour of ticket clerks and for the convenience of Members of Parliament, he would, for the duration of the war, issue to Members railway passes between London and their constituencies and so avoid the necessity for obtaining tickets for every journey.

Mr. Ralph Ascheton (Financial Secretary to the Treasury) in a written answer stated: No, sir. The extra cost of the general issue to Members of passes in the nature of season tickets, I am satisfied, would result in a substantial increase in the cost of Members' travelling facilities out of all proportion to any saving of paper and labour of clerks.

Carlisle-Edinburgh Bus Service

Mr. Joseph Henderson (Manchester, Ardwick—Lab.) on October 13 asked the Parliamentary Secretary to the Ministry of War Transport if he was aware that the withdrawal of the Scottish Motor Traction Company's bus on Tuesdays and Fridays each week, from the Carlisle to Edinburgh and Edinburgh to Carlisle service, was causing great hardship to the people residing between Langholm and Hawick, leaving them without any road transport service; and, in view of the fact that some of these inhabitants lived 10 miles from the nearest railway station, would he take immediate steps to provide them with reasonable transport facilities.

Mr. Noel-Baker stated in a written answer: This service was withdrawn on Tuesdays and Fridays, because so few passengers made use of it.

Transport Facilities for Workers

Mr. R. De La Bere (Evesham—C.) on October 13 asked the Parliamentary Secretary to the Ministry of War Transport, whether, with a view to making more adequate provision of transport and saving man-hours for those engaged on munition work and other essential work, the Government would now consider increasing the number of buses in the more congested areas throughout the country.

Mr. Noel-Baker in a written reply stated: As the Minister of Labour said in his statement to the House on September 23, the Government is anxious to make all practicable improvements in the transport facilities for workers. In consequence, arrangements are being made to strengthen

bus services which are used by workers in those places where the need for improvement is most urgent, and where the necessary drivers and conductors can be found.

Forth & Clyde Canal Proposal

Mr. G. Mathers (Linlithgow—Lab.) on October 13 asked the Parliamentary Secretary to the Ministry of War Transport what progress had been made with the inquiry about the proposed Forth & Clyde canal; and whether the report would be made available to Members.

Mr. Neil Maclean (Govan—Lab.) asked the Parliamentary Secretary to the Ministry of War Transport whether any further steps had been taken, or were under consideration, for the construction of the canal.

Mr. Noel-Baker stated in a written answer: Much preliminary work has been done on the technical and other merits of the proposal for a Forth-Clyde Ship Canal. Memoranda have been prepared on particular aspects of the problem; the departmental group appointed by the Minister of War Transport is meeting to-day to consider these memoranda; but I cannot yet say when its report will be available. As the Minister of War Transport said in the House of Lords, the report will be confidential. He would prefer, therefore, to wait until he had received it before deciding how far it would be proper for him to disclose its contents.

Parliamentary Notes

Workers' Unlimited Travel Passes

On the motion for the adjournment of the House of Commons on October 13, Mr. R. H. Turton (Thirsk & Malton—C.) raised the question of the withdrawal by the Ministry of War Transport of workers' unlimited travel passes, especially in Yorkshire. He challenged the Parliamentary Secretary to show that the withdrawal of these unlimited travel tickets had taken off one bus, or curtailed one service. The only result achieved had been extra profits for already profitable bus companies.

He found that on June 21, when unlimited travel ceased, and the workers were given only the advantage of a six-day travel ticket, the expense of travel on the long-distance part was increased substantially. As a fair sample of what had happened, he referred to the Easingwold-York service, a distance of 23 miles, which used to cost the worker £14 a year. That same travel, only one journey each way a day, was raised on June 21 to £18 4s., a rise of 30 per cent. When he represented to the Parliamentary Secretary that the increase was unwarranted, he helped him by reducing it to £17, but was there any reason, he asked, why a worker from Easingwold engaged in a factory at York, should have his travelling expenses increased by 22 per cent. It was clear that by increasing the charge not one bus service on that route had been curtailed, but the company whose vehicles plied between York and Easingwold had been given a profit of an extra £5 a year for every worker who used that service.

Dealing with the workers who lived around the periphery of a city and who used to go home for lunch, and therefore did four journeys a day, he said that previous Governments of all parties had encouraged workers to live away from the centres of the cities. Housing estates had been developed around York that were, in most cases, four or five miles away from the centre. The cost of travelling before June 21 was £7 16s. a year. Now, as a result of the withdrawal of the contract ticket, this had been raised to £16 9s. 4d., a rise of 110 per cent., and in the case of

those who went in for firewatching and had in addition, to do other journeys into York, that increase was even greater. Those increases in the fifth year of war were quite unwarranted, and he asked the Minister to take action to remedy the position. The rise which took place on June 21 was the culmination of a long series of increases in travelling costs. He had given the figure of £7 16s. On September 2, 1939, it had been £5 10s. The constant increase of travel rates, which had been encouraged and he believed stimulated and directed by the Ministry of War Transport, had resulted in workers having to pay 200 per cent. more for their travel than on September 2, 1939, at a time when the House was trying to keep down living costs and stop inflation.

Mr. G. Mathers (Linlithgow—Lab.) said York was a very big railway centre, and many of his colleagues in the Railway Clerks' Association lived in and around York to carry on their daily avocations. He had been asked to back up Mr. Turton in his protest about the way in which the Ministry of War Transport were handling this matter. The annual travel between York and Haxby used to be covered by taking out 12 monthly tickets at 13s. 6d. each, a total of £8 2s. Now it was necessary to take 52 weekly tickets at 3s. each, plus five daily ordinary tickets at 8d. each, for 52 weeks in the year, a total cost of £16 9s. 4d. Adequate facilities did not exist in York for these people to take a mid-day meal.

Mr. P. J. Noel-Baker (Joint Parliamentary Secretary, Ministry of War Transport) said there had been a good deal of discussion about this matter recently in West Yorkshire, but less now than 12 months ago. He was glad of the opportunity to explain why they had abolished unlimited travel. He would say how much he regretted it and indeed how much he detested the limitation of travel facilities which it was his duty to propose and defend. The task was neither light nor agreeable, particularly as to buses. In some cases the Ministry had made economies by sweeping away whole services, as, for instance, the Green Line buses of London. They were hearing about the North now, largely because it came in later than other people. It had nothing whatever to do with the bus companies. There was not one change of fares which had been made except by the instructions of his Ministry and he took full responsibility for it all. Unless he was misinformed, he did not believe that one penny of that would go into the pockets of the bus companies because he believed they were already paying Excess Profits Tax and it went to the Chancellor of the Exchequer. Generally, all over the country they had been able to save duplicate buses which was not very often noticed by the public. Very often it had prevented overloading which was quite as important as cutting out duplicate buses. He believed it had brought them a real result without causing any very great hardship and that to reverse it now would have a disastrous psychological effect on the public. As to the increased cost of travel, Mr. Turton mentioned a journey from Easingwold to York. The fare was 0.49d. a mile.

Mr. Turton asked if the Parliamentary Secretary disagreed with the figures he had given, showing there had been a sudden increase of 22 per cent.

Mr. Noel-Baker said that if Mr. Turton would look at the basic rate as it was before, he would see that the present rate was less than a ½d. per mile. Under unlimited competition bus fares in many parts of the country were extremely low—some would say fantastically low.

Notes and News

John Thompson Engineering Co. Ltd.—This company is again paying an interim dividend of 5 per cent., less tax.

Ribble Motor Services Limited.—The usual interim dividend of 4 per cent., less tax, is being paid.

Belfast Enquiry Office Closed.—The Northern Ireland Road Transport Board has announced that its enquiry office in North Street, Belfast, was closed on October 9.

Jamaica Government Railway Staff Vacancies.—Applications are invited for the posts of First Assistant Engineer, and Second Assistant Engineer, Jamaica Government Railway. Details are given in our Official Notices, page 423.

Increased Argentine Exports.—Argentine exports for the nine months to the end of September totalled 3,694,000 tons, valued at 1,511,763,000 pesos (£90,705,780), compared with 4,111,000 tons, and 1,358,932,000 pesos (£81,535,920), in the same period of last year.

Locomotive Power.—At a general meeting of the Institution of Locomotive Engineers on October 27, at 5.30 p.m., in the hall of the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, a paper on "Locomotive Power" will be read by Mr. E. C. Poultny, O.B.E., M.I.Loco.E.

Institution of Locomotive Engineers Luncheon.—A luncheon will be held at the Connaught Rooms, Great Queen Street, W.C.2, on November 5, at 1 p.m. A reception by the President of the Institution, Mr. O. V. S. Bulleid, will commence at 12.15 p.m. Applications for tickets, price 10s. 6d., should reach the secretary of the Institution before November 1.

Serck Radiators Limited.—Report for the period August 2, 1942, to July 31, 1943, shows that the profit, after providing for all taxation, was £54,094 (£51,880). Adding £12,922 brought forward makes £67,016. A sum of £15,000 (£10,000) is allocated to war contingencies reserve, and general reserve gets £15,000 (£20,000). The directors again recommend a dividend of 15 per cent., or 3s. on each £1 of stock, and the bonus is 10 per cent. (7½ per cent.), or 2s. on each £1 of stock, both less tax, leaving £12,016 to be carried forward.

Institution of Railway Signal Engineers.—A meeting of the Institution of Railway Signal Engineers has been arranged for October 27 at 5.30 p.m., to be held at the Institution of Electrical Engineers, Victoria Embankment, W.C.2. It is proposed to continue the adjourned discussion of the problems raised by the President during his address at the annual general meeting in 1942. The problems relate to the running of cables overhead and underground; what is the minimum protection required when a remote interlocking is added to an existing signal box; and the present status of dimming of signal lights.

Chicago Underground.—The formal dedication ceremony of the first passenger underground railway in Chicago, by the Mayor (Mr. Edward J. Kelly), took place on October 16. The line is 4.9 miles in length and is stated to have cost \$34,000,000. It was built as a joint enterprise of the City of Chicago and the Federal Government. There was a formal inauguration on March 29 last, and "exhibition" trains have since been run to encourage the sale of War Bonds. Difficulties in securing equipment have deferred the opening to regular traffic.

Some details of the line were given in our issue of April 2 last (page 357).

Colvilles Limited.—The directors are paying an interim dividend of 3 per cent., less tax, on the ordinary stock (same).

Skefko Ball Bearing Co. Ltd.—This company announces an interim dividend of 4d. a share, or 6½ per cent., tax free, the same as a year ago.

Post-War Irish Tourist Plans.—At a recent meeting of the directors of the Irish Tourist Association, plans were considered for post-war publicity. It was decided to prepare a new Guide to Ireland, and a series of county and resort publications.

North Western of Brazil Railway Rate Increase.—The Minister of Transport & Public Works has authorised a general increase of 10 per cent. in goods rates on the North Western of Brazil Railway (owned and administered by the Federal Government).

G.W.R. Cartage Services.—Despite a heavy increase in traffic for which the Great Western Railway provides cartage services, measures directed towards the conservation of petrol and rubber have resulted in a saving of nearly 3,000,000 vehicle-miles in the first three-quarters of this year compared with the corresponding period of 1939.

Ransome & Marles Bearing Co. Ltd.—Net profit for the year to June 30, 1943, after charging depreciation and making provision for taxation, fees, etc., amounted to £122,699 (£119,434), and £76,872 (£76,305) was brought in. War damage insurance absorbs £12,643 (£15,867), and allocations are made of £35,000 (£30,000) to reserve for contingencies and of £3,000 (same) to directors' additional remuneration. The final dividend is 11 per cent., less tax, again making 20 per cent. for the year, and leaving £78,928 to be carried forward.

New C.P.R. Cabooses.—The increased number of freight trains has necessitated the construction by the Canadian Pacific Railway of 50 cabooses for the accommodation of guards and train crews. The vehicles are being constructed in the Angus shops of the company, to the design of Mr. H. B. Bowen, Chief of Motive Power & Rolling Stock. The interiors of the cabooses have been planned to provide maximum comfort; they will be insulated against cold, and bunks and storage-space for bedding will be provided. Heaters, equipped with ovens for cooking, refrigerators, water tanks, wash-basins and portable tables will be installed. The vehicles are to be carried on four-wheel cast-steel trucks with elliptic springs.

L.P.T.B. Extension of Time Order.—The Minister of War Transport has made the London Passenger Transport Board (Extension of Time) Order, 1943 (S.R. & O. 1943, No. 1354) extending by three years the time limited by:—(1) Section 22 of the London Passenger Transport Act, 1938, for the completion of works in Hammersmith, St. Pancras, Wandsworth, Southwark, and Greenwich; (2) Sections 38 and 42 of the Act of 1937, as extended by the L.P.T.B. (Extension of Time) Order, 1940, for the compulsory acquisition of lands, etc. (a) in Islington, Kensington, Hendon, Harrow, Elstree, and Amersham, authorised to be acquired by the Act of 1937 for the purposes of Works Nos. 1, 2, 3, 6, 7, 8, and 8A, and for additional lands required for the improvement of Gloucester Road Station, (b) lands in Holborn and St. Pancras for works authorised by the London Electric,

Metropolitan District, Central London, and City & South London Railway Companies Act, 1930; (c) lands in Southwark, Camberwell, Lambeth, and Holborn for works authorised by the London Electric, Metropolitan District, and Central London Railway Companies (Works) Act, 1931, including lands for the improvement of Russell Square Station; (d) lands in Chelsea and the City of Westminster for a work authorised by the London Electric, Metropolitan District, and City & South London Railway Companies Act, 1931; (e) additional lands

British and Irish Railway Stocks and Shares

Stocks	Highest 1942	Lowest 1942	Prices	
			Oct. 15, 1943	Rise/ Fall
G.W.R.				
Cons. Ord.	58	39	59½	+ ½
5% Con. Pref.	115½	105½	110½	+ ½
5% Red. Pref. (1950) ..	109½	103½	107	—
5% Rt. Charge	133½	123½	126½	+ ½
5% Cons. Guar.	130½	121½	123½	—
4% Deb.	117	105	109½	+ ½
4½% Deb.	118	108	100½	—
4½% Deb.	125	113	117½	—
5% Deb.	137	127	12½	—
2½% Deb.	77	70	71½	—
L.M.S.R.				
Ord.	28½	16½	31½	+ ½
4% Pref. (1923)	63½	50½	60½	+ ½
4% Pref.	76½	67½	74½	+ ½
5% Red. Pref. (1955) ..	103½	94½	103½	—
4% Guar.	104½	97½	100	+ ½
4% Deb.	108½	101½	105½	+ ½
5% Red. Deb. (1952) ..	111	107½	109½	—
L.N.E.R.				
5% Pref. Ord.	9½	2½	9½	—
4% Def. Ord.	5	1½	4½	—
4% First Pref.	62	49½	63	—
4% Second Pref.	32½	18½	32½	—
5% Red. Pref. (1955) ..	95½	79	94½	—
4% First Guar.	98	88	9½	+ ½
4% Second Guar.	90	78	8½	+ ½
3% Deb.	85	76	81½	+ ½
4% Deb.	106½	100½	101½	+ ½
5% Red. Deb. (1947) ..	106	103	103	—
4½% Sinking Fund Red. Deb.	106	102½	105½	—
SOUTHERN				
Pref. Ord.	77	61½	76	+ ½
Def. Ord.	23½	14½	21½	+ ½
5% Pref.	112½	104	110	+ ½
5% Red. Pref. (1964) ..	110½	105½	111½	—
5% Guar. Pref.	131	121½	123½	—
5% Red. Guar. Pref. (1957)	115½	109½	111½	—
4% Deb.	116	104½	108½	+ ½
5% Deb.	134	125½	123	—
4% Red. Deb. (1962— 67)	110½	106	107½	—
4% Red. Deb. (1970— 80)	111	106½	108½	+ ½
FORTH BRIDGE				
4% Deb.	109½	108	106	—
4% Guar.	105½	100	103½	—
L.P.T.B.				
4½% "A"	122½	111	115½	—
5% "A"	131½	122	124½	+ ½
3% Guar. (1967—72) ..	95½	97½	98	—
5% "B"	121	111½	116½	+ ½
5% "C"	56½	38	69	—
MERSEY				
Ord.	27½	20½	32	—
3% Perp. Pref.	61½	56½	61	—
4% Perp. Deb.	102½	99½	103	—
3% Perp. Deb.	80½	76	77	—
IRELAND BELFAST & C.D.				
Ord.	9	4	6½	+ ½
G. NORTHERN				
Ord.	29½	12½	19½	+ ½
Pref.	—	—	40½	—
Guar.	—	—	16	—
Deb.	—	—	75	—
G. SOUTHERN				
Ord.	25	10	19½	—
Pref.	29	12½	22	—
Guar.	53	35½	42½	—
Deb.	71½	55½	70	—

§ ex-dividend

OFFICIAL NOTICES

APPLICATIONS are invited for the following posts with the Jamaica Government Railway for one tour of three years in the first instance with possibility of permanency. Free passages provided.

FIRST ASSISTANT ENGINEER. Salary £650—£50—£750 a year. Candidates should preferably be A.M.I.C.E. or hold an equivalent qualification and have had practical experience in railway engineering, railway construction work and survey in the field and in the office of a railway Chief Engineer. Ref. E.776.

SECOND ASSISTANT ENGINEER. Salary £475—£25—£550 a year. Higher initial salary according to qualifications and experience. Candidates must have passed Sections A and B of the A.M.I.C.E. examination

or hold a University degree in Civil Engineering and have had regular training as a Civil Engineer on railway works with experience of construction and maintenance and in the field on bridge construction. They should have a thorough knowledge of the design and construction of bridges and should be quick and accurate surveyors. They should also be capable of taking charge of the drawing office if required to do so. Ref. E.177.

Write, stating age, and full particulars of qualifications and experience, and quoting reference number of post applied for, to the Ministry of Labour and National Service, Central (Technical and Scientific) Register, Alexandra House, Kingsway, London, W.C.2.

OFFICIAL ADVERTISEMENTS

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Monday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

in Holborn authorised by the L.P.T.B. Act, 1934, for providing access to Russell Square Station.

Kitchen & Wade Limited.—The directors have declared an interim dividend of 12½ per cent., less tax (same).

Peruvian Corporation Limited.—The corporation on November 1 will pay to its debenture holders on account of interest the sum of 3 per cent. This payment will be in full discharge of Coupon No. 96 representing the instalment of interest due April 1, 1938.

Seville Tramways.—The net profit of this company for 1942, including the balance brought forward, amounted to 687,872 pesetas. After providing for reserves, a dividend was declared of 6 per cent. In view of the high cost of running buses on producer gas, the company is considering the conversion of all its services to tramways.

Ferrocarriles Catalanes.—Earnings of this company in 1942 amounted to 15,070,342 pesetas, or roughly 3,000,000 pesetas more than in 1941. Working expenses were 12,600,000 pesetas. The increase in expenditure was due to the heavier costs of materials, and to increased wages. The company operates a system of metre-gauge railways, 195 km. (121 miles) in extent, serving the outer suburbs and districts of Barcelona.

Madrid-Aragon Railway.—The report for 1942 of this company, which works 161 km. (100 miles) of metre-gauge line between Madrid and Arganda and Colmenar de Oreja, with a branch to Alcen, shows earnings of 3,429,498 pesetas, an increase over 1941 of 1,328,334 pesetas. This was due partly to increased traffic, and partly to the increase in tariffs which came into force in February, 1941. Working expenses also increased, and amounted to 3,447,280 pesetas, or 1,082,092 pesetas more than in the preceding similar period.

Southern Railway Extension of Time Order.—The Minister of War Transport has made the Southern Railway (Extension of Time) Order, 1943 (S.R. & O. 1943, No. 1425) extending by three years the time now limited: (1) by the Southern Railway Act, 1935, as extended by the Southern Railway (Extension of Time) Order, 1940, for the completion of Railway No. 1 authorised by the Act of 1935, and of Railways Nos. 3, 4, 5, and 6, and Widenings Nos. 2, 3, 4, and 5 authorised by the London, Brighton & South Coast Railway Act, 1903, and of the railway authorised by the Southern Railway Act, 1930; (2) by Section 34 of the Southern Railway Act, 1937, as so extended, for the acquisition of lands (a) in Folkestone, Hawkinge, Capel-le-Ferne, and Hougham Without required for the deviation railway between Folkestone and Dover authorised

by the Southern Railway Act, 1934, and (b) in Hougham Without authorised to be acquired by Section 22 of the Act of 1934.

William Beardmore & Co. Ltd.—On the ordinary capital an interim dividend of 3 per cent., less tax (same), has been declared in respect of 1943.

Thos. Tilling Debenture Redemption.—Thos. Tilling Limited will on January 3 next redeem at par the whole of the outstanding 5 per cent. first mortgage debenture stock of the company. The amount outstanding is £361,111.

Accident to Olympian.—The Olympian train of the Chicago, Milwaukee, St. Paul & Pacific Railroad left the rails at Paragon, Montana, on October 14, during its run from Tacoma to Chicago. Fifty-eight persons are said to have been injured.

Charente Steamship Company and Air Powers.—A resolution was unanimously passed on July 28 at an extraordinary general meeting of the Charente Steamship Co. Ltd. in favour of altering the memorandum of association so as to enable the company to establish and maintain air services. A petition to confirm this resolution is to be heard before the Vice-Chancellor in Liverpool on Monday, October 25.

Air Transport after the War.—The Yorkshire Section of the Institute of Transport opened the 1943-44 session at Leeds on September 29, when Mr. Roderick Waugh gave an address on air transport. He analysed the possibilities and functions, and pointed out that it was not a substitute for other methods of transport, any more than the telegram was for the ordinary letter. It was important that the true facts should be understood, so that an epidemic of exaggerated claims and forecasts should not gain credence.

Railway Mailbag Thefts.—Evidence of a widespread conspiracy to steal mailbags from trains over a long period was heard on October 5 at Birmingham Quarter Sessions. Three men were concerned in the thefts, of whom two were railwaymen. One railwayman, and one outsider, who was said to be the brains of the gang, were each sentenced to five years' penal servitude for conspiracy and for the theft and receiving of mailbags. The other railwayman received a sentence of three years' penal servitude. Property worth £900 which had been stolen from mailbags was found in the possession of the prisoners.

Callender's Cable & Construction Co. Ltd.—Trading profits for the year 1942, after providing for taxation, were £564,042 (£424,958). Net profit was £451,031 (£313,372) after providing £80,000 (same) for depreciation, and £33,011 for fees and debenture interest, and £266,304 (£377,519) was brought in, making £717,335 (£690,891). Premium on redemption of debentures required £30,000, and an allocation of £50,000 is made to a fund to be

established for workpeople's amenities. A transfer of £50,000 (£200,000) is made to reserve for equalisation of dividends or for war contingencies. The dividend on the ordinary stock for the year is again 15 per cent., with the addition of a cash bonus of 5 per cent. (nil), and £306,552 is to be carried forward.

Entre Rios Railways Co. Ltd.—The directors have decided to pay on November 13, 1943, a further six months' arrears of interest (for the period ended March 31, 1942) on the 4 per cent. debenture stock of the company together with 5 per cent. per annum interest on such arrears provided for under the moratorium scheme, the total amounting to £2 3s. 3d. per cent., less income tax.

Extent of Coal Resources.—Dr. E. S. Grumell, the Melchett medallist for the current year, in the course of his address to the Institute of Fuel, on October 14, said that the conservation of coal resources should be the keynote of the future. Speaking of a survey of resources, he said that the real question was how long the available coal could be got at a reasonable cost. The answer was that, in the opinion of a number of people, the best seams would be worked out in from 30 to 50 years, and coal would be very costly unless greatly improved methods of mining were invented. The study of improved methods of using fuel and power, to conserve coal, was of first importance. Research should be increased and co-ordinated. Major G. Lloyd George, Minister of Fuel & Power, paid tribute to the work of Dr. Grumell and of Dr. E. W. Smith, President of the Institute.

Agreements between Road and Rail.—Speaking recently at Chatham Rotary Club, Major H. E. Crawford, President of Associated Road Operators, said that fears had been expressed that any agreement between road and rail would be against the national interest. He asked why that was so, and how, if such an agreement were contemplated—and it was—could it be stopped? Rail rates already were controlled by statute, and had been for many years. It was obvious that any fixation of rates by voluntary agencies must be open to appeal to anybody who conceived himself to be aggrieved. With that safeguard, a balance would be arrived at whereby the rates agreed on would be fair to all. Major Crawford added that the speech of Sir William Wood to the Institute of Transport on October 12 had been a powerful and timely plea for the preservation of initiative and the spirit of competition in service which was behind all the discussions now going on between road and rail interests. The railways, as well as the roads, were convinced that they could provide an efficient service at reasonable charges far better if they were kept free from the deadening influence of State control or any form of State-sponsored bureaucracy.

Railway Stock Market

Because of the absence of any appreciable improvement in the volume of business in Stock Exchange markets, there was a reactionary tendency in most sections of the Stock Exchange. Subsequently, however, the rather lower prices were inclined to attract buyers, and at the time of writing, declines on balance have been small. Contrary to the recent trend, home railway stocks provided one of the firmest groups of securities, and on balance small gains have been shown in both the junior and prior-charge stocks. The recent decline in home rails apparently has drawn attention to the large and attractive yields. Buying has not been on a large scale, but there was very little selling, and prices responded readily to the improvement in sentiment. The latter was assisted mainly by less pessimistic market views as to the post-war outlook for the railways. It has been suggested in these notes on previous occasions that the market was apparently not giving sufficient attention to the favourable points in the position and outlook. Due to the fact that the financial agreement is scheduled to run until at least one year after the war, dividend prospects of the junior stocks are more clearly defined than those of any other group of equity securities; dividends at around last year's rates may very well continue until there is final agreement on the important question of post-war transport organisation. Market sentiment was assisted by the statement in Mr.

Churchill's recent speech that although he favoured nationalisation of the railways after the last war he was "a bit affected by the experience of the national control of the railways after the war," which, he pointed out led to the public getting a very bad service and to stockholders having very unsatisfactory returns. It is realised that post-war transport organisation is still a matter as to which uncertainty must prevail; but it certainly seems that views recently expressed in responsible quarters would suggest that there is little justification for the pessimistic assumptions which have been current in the market. Over a period, home railway stocks may have good scope for improvement in value, if considered only on the dividend position and the excellent yields obtainable. Fluctuations must be expected from time to time, and it is not contended that they will necessarily move strongly against the market trend. Nevertheless, there are no justifiable grounds for home railway junior stocks being quoted at levels which show yields materially above those ruling on shares of various other important industries whose post-war outlook is probably no easier to assess than that of the railways.

Contrary to the upward trend in evidence in stocks of South American railways in the past two weeks, reactionary conditions have developed, due mainly to the absence of continued improvement in demand. Selling was not heavy, but as

to Argentine stocks, sentiment was influenced more by recent indications of political trends in the Argentine than by the arrival in the republic of members of the railway mission. Brazilian railway stocks mostly lost recent gains.

Compared with a week ago, Great Western ordinary has rallied from 59 to 60½, and the guaranteed and debenture stocks were better at 124½ and 110 respectively. L.M.S.R. ordinary moved up from 31½ to 32½; the 1923 preference was maintained on balance at 60½, and the senior preference moved higher to 74½. L.N.E.R. second preference strengthened from 32 to 32½, and the first preference from 59½ to 60. L.N.E.R. first and second guaranteed were 95½ and 87½ respectively. Southern deferred reflected the general trend with improvement from 24 to 24½, while the preferred was 76½, compared with 75½ a week ago, and the 5 per cent. preference was better at 110½. London Transport "C" was maintained at 69½. Among Argentine stocks, B.A.Gt. Southern was 15½, compared with 16, and the 4 per cent. debentures 65, compared with 66½. B.A. Western 4 per cent. debentures eased from 61½ to 59½, and Central Argentine 6 per cent. preference from 33½ to 33. Elsewhere, Leopoldina debentures reacted from 59 to 58, and United of Havana debentures were 34. On the other hand, San Paulo ordinary was higher on balance at 64. Fractional movements were shown in Canadian Pacifics.

Traffic Table and Stock Prices of Overseas and Foreign Railways

Railways	Miles open	Week ending	Traffic for week		No. of Weeks	Aggregate traffic to date			Shares or stock	Prices				
			Total this year	Inc. or dec. compared with 1941/2		Totals		Increase or decrease		Highest 1942	Lowest 1942	15 Oct. 1943	Yield % (See Note)	
						1942/3	1941/2							
South & Central America														
Antofagasta (Chili) & Bolivia	834	10.10.43	28,510	+ 4,630	41	1,150,710	868,070	+ 282,640	Ord. Stk.	14	7½	15	Nil	
Argentine North Eastern	753	9.10.43	13,740	+ 756	15	204,210	201,462	+ 2,748	"	6½	3	7	Nil	
Bolivar	174	Sep., 1943	5,755	+ 238	40	47,669	40,709	+ 6,960	6 p.c. Deb.	19½	10	20½	Nil	
Brazil									Bonds	20½	9	22½	Nil	
Buenos Ayres & Pacific	2,807	9.10.43	105,183	+ 15,783	15	1,261,803	1,268,340	- 6,540	Ord. Stk.	7½	4	8	Nil	
Buenos Ayres Great Southern	5,080	9.10.43	153,960	+ 16,680	15	2,093,043	1,901,880	+ 191,160	Ord. Stk.	12½	7½	16	Nil	
Buenos Ayres Western	1,930	9.10.43	48,600	+ 840	15	738,960	722,400	+ 13,440	"	12½	6	14	Nil	
Central Argentine	3,700	9.10.43	140,835	+ 21,297	15	1,902,303	1,811,619	+ 90,684	"	9½	4½	9½	Nil	
Do.									Dvd.	3½	2½	4	Nil	
Cent. Uruguay of. M. Video	972	9.10.43	31,323	+ 8,667	15	436,106	305,999	+ 130,107	Ord. Stk.	8	4	7½	Nil	
Costa Rica	262	Aug., 1943	25,656	+ 11,729	8	48,907	26,688	+ 22,219	Stk.	16½	11	15½	Nil	
Dorada	70	Sep., 1943	24,660	+ 5,360	39	196,807	137,705	+ 59,102	1 Mt. Db.	90½	89	95½	6½	
Entre Rios	808	9.10.43	20,135	+ 756	15	290,133	269,502	+ 20,628	Ord. Stk.	33	4½	7	Nil	
Great Western of Brazil	1,030	9.10.43	18,700	+ 2,200	41	632,203	419,700	+ 212,500	Ord. Sh.	9½	9½	33½	Nil	
International of Cl. Amer.	794	Aug., 1943	\$540,396	+ \$242,201	32	\$5,625,556	\$4,308,750	+ \$716,806	"					
Interoceanic of Mexico									1st Pref.	1½	5/3	2	Nil	
La Guaira & Caracas	22½	Sep., 1943	8,035	- 555	39	76,460	63,355	+ 13,105	5 p.c. Deb.	11½	5	8½	Nil	
Leopoldina	1,918	9.10.43	35,158	+ 2,353	41	1,382,937	1,229,085	+ 153,852	Ord. Stk.	6½	3½	6½	Nil	
Mexican	483	7.10.43	ps. 390,600	+ ps. 121,100	13	ps. 5,733,900	ps. 4,036,600	+ ps. 1,697,300	Ord. Stk.	1	1	1½	Nil	
Midland Uruguay	319	Aug., 1943	14,706	+ 4,213	41	31,160	23,107	+ 8,053	"					
Nitrate	382	30.9.43	6,125	- 1,774	39	114,950	140,095	- 25,145	Ord. Sh.	77½	3½	81½	Nil	
Paraguay Central	274	8.10.43	\$5,369,000	+ \$1,676,000	15	\$78,672,000	\$54,509,000	+ \$24,163,000	Pr. Li. Stk.	53	40	72	Nil	
Peruvian Corporation	1,059	Sep., 1943	107,267	+ 21,631	13	314,208	251,242	+ 63,053	Pref.	19½	5½	14½	Nil	
Salvador	100	Aug., 1943	c 91,000	+ c 42,000	9	c 199,000	c 128,000	+ c 71,000	"					
San Paulo	153½	3.10.43	52,173	+ 14,084	40	1,710,759	1,460,496	+ 250,263	Ord. Stk.	59	41	64½	3½	
Talca	160	Sep., 1943	7,175	+ 2,240	16	16,905	16,660	+ 245	Ord. Sh.	41½	23½	28½	Nil	
United of Havana	1,301	9.10.43	42,175	+ 6,637	15	708,642	589,365	+ 119,277	Ord. Stk.	8½	2½	5	Nil	
Uruguay Northern	73	Aug., 1943	1,451	+ 395	9	2,838	2,198	+ 640	"					
Canada														
Canadian Pacific	7,034	7.10.43	1,230,200	+ 244,800	40	44,434,400	38,410,800	+ 6,023,600	Ord. Stk.	16½	9½	16	Nil	
India														
Barsi Light	202	Aug., 1943	15,285	+ 2,003	22	107,055	76,587	+ 30,468	"					
Bengal-Nagpur	2½	July, 1943	955,725	+ 17,325	17	4,184,625	3,553,425	+ 631,200	Ord. Stk.	102½	88	102½	3½	
Madras & Southern Mahratta	2,939	31.7.43	273,075	+ 81,874	18	3,324,300	2,778,222	+ 546,078	"	105½	87	107½	6½	
South Indian	2,349	20.7.43	199,562	+ 16,961	16	2,219,544	2,054,903	+ 164,641	"	103½	88½	103½	4½	
Various														
Egyptian Delta		10.9.43	13,189	+ 766	24	229,115	170,202	+ 52,913	Pr. Sh.	5½	1½	2½	Nil	
Manila									B. Deb.	44	35	40	8½	
Midland of W. Australia	277	Aug., 1943	36,199	+ 7,460	9	70,424	56,608	+ 13,816	Inc. Deb.	95	90	100	6	
Nigerian	1,900	26.6.43	60,473	+ 1,150	11	831,293	693,193	+ 138,100	"					
South Africa	13,291	4.9.43	842,927	+ 41,649	22	19,084,646	17,229,868	+ 1,784,778	"					
Victoria	4,774	Mar., 1943	1,595,068	+ 255,764					"					

Note: Yields are based on the approximate current prices and are within a fraction of ½
† Receipts are calculated @ 1s 6d. to the rupee

Argentine traffic is given in sterling calculated @ 16½ pesos to the £
\$ ex dividend